

# 2017 Rule Book Updates 7-20-17

## **Move up Rule: (Page 10)**

A competitor is not allowed to move up from one age group to a higher level, and then back down. Once a competitor moves up they must stay in that class unless USPKS feels it is not in the best interest of the Series.

\*\* In USPKS, Micro Swift competitors who meet the age requirement have the option of running Yamaha Cadet (as there is no Rookie level option). Route 66 competitors entering Micro Swift AND Yamaha Cadet at USPKS have the option of running EITHER Yamaha Rookie or Yamaha Cadet at Route 66, but once they have moved up to Cadet at Route 66, they may not go back to Rookie without the Series approval. Route 66 competitors in Micro Swift that are not competing in USPKS are not eligible to run Yamaha Cadet.

Yamaha Junior and X30 Junior competitors that are 20 lbs. or more over the class minimum weight, with no ballast on kart; may request permission from the Tech Director to move up to the appropriate Senior Class providing the following:

- 1) They must have lap times competitive for the Senior Class that they are moving to, and
- 2) They must present the kart race ready, with the driver's safety gear in the seat, to the Tech Director to verify the weight of the kart and driver.

\*They will be subject to a weigh-in at any time.

## **Push Back Nose Inspection: (Page 11)**

All non-kid kart classes must utilize a front nose equipped with a CIK-homologated pushback nose system, with a maximum of two CIK-homologated clamps. OEM clamps may be substituted for, but must be CIK-homologated for that purpose. Competitors will present their karts to the grid with the nose cone in place and the clamps on, zip ties may be used to hold the clamps to the bumper but shall not hold the clamp from opening. The grid official will do an inspection of the nose while on the kart. The official will be checking for holes and to verify that the nose has not been damaged to the point that it has lost its rigidity. During inspection the competitor may be asked to remove one or both clamps by hand and then re-install them. The nose is a tech item, and therefore may be inspected at any time during the day by series officials. If any officials ask to inspect the nose, the driver or their mechanic must remove it for inspection, without the use of any tools. If the nose, clamps, or blocks, are found to be illegal, or the mechanic/driver is unable to remove it for inspection when asked, there will be a 10-second penalty assessed. Additional penalties up to disqualification may be assessed depending on the infraction.

## **Push Back Nose Cone Penalties: (Page 13)**

*Push back nose cone mounts have been instituted for the purpose of reducing the contact between karts, intentional, or otherwise. Of particular importance to a safe start, is the need to leave adequate space between karts on the formation and pace laps. Two to three feet of "cushion" space should be left between you and the kart in front of you during the pace and formation laps to ensure that there is no contact. Failing to leave adequate space between your kart and the kart in front of you is not an excuse for a dislodged nose cone.*

Push back mounts shall remain in the correct position during any time of competition. Drivers should take care to allow enough distance between themselves and the kart in front of them during warm up, pace laps, start of the race, and scale line, to prevent contact that may dislodge the nose cone. If any part of the top or bottom bar/bumper is in the drop down area as pictured below, the competitor will be assessed a 5-second penalty per side with a maximum penalty of 10 seconds. Intentionally dislodging another competitor's nose cone will be considered unsportsmanlike conduct and subject to appropriate penalty. The Black Flag with Orange Circle will ***NOT*** be given to any competitor whose nose cone is no longer in the correct position. Any competitor that attempts to put the nose cone back to its correct position while on track or before crossing the scale will be disqualified for that race. If a dislodged nose cone penalty is issued, you may protest it using the normal protest channels, but only conclusive on-board video evidence will be considered.



### **Lapped Competitor: (Page 13)**

**USPKS** – In all classes a competitor that is about to be lapped will be black flagged. The competitor will be placed in the on track position at the time of the black flag and receive points for that position.

**Route 66** – A driver that is being lapped shall allow the lead karts the preferred racing line to complete the pass. If the lapped driver races the lead karts, and does not allow the lead karts the preferred racing line, they will be black flagged. If competitor is about to be lapped a second time they will be black flagged. The competitor will be placed in the on track position at the time of the black flag and receive points for that position. Route 66 Officials have the right to black flag a competitor the first time if they feel the competitor could endanger another competitor or be a danger to themselves.

\* If a competitor ignores the black flag and number board after (3) three laps scoring will stop and the competitor will be DQ'ed.

### **Tie Breaker: (Page 18)**

#### **Add**

**Qualifying Tie** – If there is a tie during qualifying it will be broken by reverting back to the second fastest lap by each competitor and then to the third fastest lap if needed. If there is still a tie we will revert to the last round of practice.

### Driver Fairing: (Page 24)

The driver fairing must be mounted with bendable material that is attached to the uprights, frame or floor pan and cannot expose any sharp edges that could harm the driver. No part of the fairing shall extend more than 1" above the top of the steering wheel; and shall be a minimum of 1 15/16" from any part of the steering wheel. Minimum fairing width is 9 7/8"; maximum width is 11 13/16". Measurements will be performed with wheels straight ahead, height of fairing will be checked on scales. If an official feels that the height of the fairing is hindering the driver's vision, the fairing must be lowered. **No part of the driver fairing can be behind and or lower than the top of the nose cone that could stop the nose cone from being pushed back.**

\* Cadet driver fairing shall be used on Cadet Karts.

### Yamaha KT 100 Rules and Regulation:

#### Add

All Yamaha engines will be required to utilize an auxiliary carburetor spring; below are some examples. . If a spring of a different type than one of the examples below is used, it must be approved by one of the Tech Officials.

**\*If no spring is used you will not be allowed on track.**



### IAME Swift Rules and Regulations:

### IAME KA100 Rule and Regulations:

### IAME X30 Rules and Regulations:

### IAME Bambino M1 Rule and Regulation:

#### Add

All IAME Swift, KA100, X30 and Bambino engines will be required to utilize an auxiliary carburetor spring; below are some examples. If a spring of a different type than one of the examples below is used, it must be approved by one of the Tech Officials.

**\*If no spring is used you will not be allowed on track.**



**Air Box and Filter: (Page 42 Swift (Effective 7-28-17))**

Blue OEM air box shall be as manufactured, one (1) 23mm tube (No Go). One (1) 0.200" drain hole is allowed. The OEM filter (IAME # 10751-1) or the rubber boot without a filter is legal. Any external forms of air ducts forcing air inside of air box is illegal. Rain covers are legal during rainy conditions as long as it does not act as a ram air device.

**IAME Bambino M1 Kid Kart & Comer Kid Kart: (Page 32)**

Tire Circumference – Maximum rear tire circumference is ~~33"~~ 33 3/8"

**Spark Plug: (Page 51 Bambino)**

Only NGK – BR8EG, BR8EIX, BR9EG, BR9EIX, BR10EG or BR10EIX can be used with the OEM washer in place. If a cylinder head temperature sensor is utilized, the OEM washer may be removed. Commonly used, stock, cylinder head temperature sensors may be used for comparison.

**Muffler: (Page 51 Bambino)**

Must use OEM muffler. Excessive leakage in any part of the exhaust system is illegal and competitor could be disqualified. Exhaust Gas Temperature sensors are illegal.

**Timing Procedure:**

1. Insert dial indicator in spark plug hole
2. Zero at TDC
3. Roll piston back to align marks  
Per M1 60cc - Pull Start – USA PDF (Found on Rt.66 website)
4. Reading must be between 0.035" (0.9mm) - 0.059" (1.5mm) before TDC

**Note** – All ignition parts must be OEM and unaltered.

**Add****Tape on Engine Shroud:**

Placing tape on the engine shroud is allowed.

**Add****Recoil/External Starter:**

Either the recoil or external starter is allowed. Competitor may remove the rope, plastic rope spool and recoil spring if they chose. The two rotating parts on the motor that the recoil engages in must remain in place and the recoil cover must remain place even if all internal parts are removed.



**USPIKS**

UNITED STATES PRO KART SERIES

**2017 EDITION**

Official Technical & Sporting Rules and Regulations





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## Basics:

**\* Note: Route 66 is part of the USPKS. Whereas if USPKS is stated in this document, it covers Route 66 also unless a Route 66 supplemental rule is stated.**

### **Know the Rules:**

USPKS participants should know and follow the rules that have been set by USPKS in this document.

### **Responsibilities:**

The driver or guardian of each kart is responsible for the safe operation and condition of the equipment; they are also responsible for their actions and any crew member's actions while participating in a USPKS event.

### **Supplemental Rules:**

The Race Director can implement supplemental rules at any event. Supplemental rules will take precedence over any written rule. The supplemental rule must be delivered to the competitors in either written or verbal form.

### **Drivers Meeting:**

Every competitor is required to attend the drivers meeting; all minors shall have a parent or adult representative in attendance also. If a competitor does not attend the meeting, he/she loses the right to protest and will receive a two position penalty added on to their qualifying spot for both days of the event. Example: if you qualify 3rd you will be starting 5th in all races that use your qualifying position as the lineup. A roll call may or may not be called at the Race Director's discretion.

### **Podium Pictures:**

All drivers are required to wear their driver's suit and bring their helmet for podium pictures.

### **Sponsor Decals:**

All karts shall have all of the appropriate Sponsor decals for their class on the kart, in the correct position per provided diagram (in registration packet). If appropriate decals are not on the kart or in the correct position, the competitor could be warned during qualifying, heat or pre-final. If the competitor does not have the sponsor decals on after the final, they will be penalized one position per decal that is not on or out of place.

### **Competitive Series Decals:**

Competitive series decals are not allowed and must be removed before competing in a USPKS event. A competitor may be warned to remove any competitive series decal that is on the kart during qualifying, heats or pre-final. If the competitive series decal is on the kart after the final, they will be penalized one position per decal.

### **Spirit and Intent:**

This document provides specifications to assure engines, kart and any components used are legal. It is not intended to be used as a read-between-the-lines document. USPKS officials have the right to review and to determine if a person (builder or competitor) has changed or re-designed any part or component that would gain an advantage or bend the rules. If a competitor is deemed in violation of the spirit and intent rule, he or she may be disqualified, netting zero points for the day in the class of the DQ, without the option of dropping that race from the season points total, if applicable. If this document does not say you can, then you can't. When it states shall, then you must. When it states you may, then it is permitted. Calls on and off the track are in the eyes of the USPKS officials. If your intent is to find loopholes, please re-evaluate your association with USPKS. USPKS has the right to confiscate any parts or components up to, and including, complete karts or engines for further inspection.



**Social Media:**

When differences of opinion arise regarding USPKS rules and regulations, decisions by USPKS officials, USPKS policies, or between the competitors (and/or their charges), communication and discussion of these differences are best handled privately and directly between the parties involved. Attacking parties on social media sites like Facebook or Twitter is unacceptable and may result in disciplinary action if the USPKS Official determines that the communication is not in the best interest of the USPKS. Resulting penalties may be disqualification, ejection from the event and possibly from USPKS until further notice.

**Liability:**

All participants must sign a waiver/pit pass releasing USPKS and officials of liability before participating in a USPKS event. The signee agrees to hold USPKS and officials harmless from any and all liability. This includes but is not limited to: injury to person, employees, property and or reputation that may be sustained by signee, from all claims of injuries at present and future. This includes minors that may be at a USPKS event.

**Pit Pass:**

Everyone is required to purchase and wear a pit pass at all USPKS events.

**Insufficient Funds:**

Failure to have sufficient funds to cover checks or credit cards could cause suspension from USPKS until paid in full, and could result in cash only for future events if it is reoccurring.

**Alcohol:**

Alcohol is not allowed by anyone at any time during the day's racing event. After the event has concluded for the day, track/facility rules and local laws governing the use of alcohol shall apply.

**Threatening Actions:**

Threatening actions such as intimidation, verbal abuse or physical violence to any USPKS official, participant or spectator at an event could result in disqualification or ejection from the event, and possibly from USPKS until further notice.

**Driver Penalties:**

USPKS officials have the right to penalize a driver to meet the severity of the driver's actions. Some examples are: loss of position, start at the rear of the field, disqualification, probation or suspension.



### **Protest:**

It is the intent of the USPKS that every effort will be made to resolve all protests at the track before the weekend event ends. The rules and regulations in the USPKS Rule Book will govern the USPKS unless a supplemental USPKS rule supersedes a specific USPKS rule. If needed, a USPKS committee will be involved. All on track penalties will be decided at the event.

**Race Director or any USPKS Official will not leave the track to discuss the call until a protest is filed.**

**Verbal protests will not be accepted.**

**Protests cannot be submitted for non-performance items.**

**Only one protest per incident will be allowed.**

**There will be a \$100.00 fee for each protest.**

Money will be refunded if protest is won.

Any protest of technical specification legality and driver conduct must be submitted in writing by a legal entrant from the same class in which the alleged violation occurred. If a kart specification is protested, the protesting driver's own kart can also be subject to full inspection. If an engine specification is protested, the protesting driver's engine can also be subject to full inspection.

The protest must be submitted in writing within 30 minutes after the technical decision has been made by an official.

Once a competitor's equipment has been removed from the impound area, he or she has waived the right to file a protest.

All protests must be submitted in writing to the **USPKS Trailer** (or designated official) of the USPKS or sanctioned event within 30 minutes after the completion of the race that is being protested, or in the case of a scoring protest, 30 minutes after official results have been announced or posted. The written protest must refer to the specific rule in the USPKS rule book and page number. Anyone filing a protest on another competitor's equipment must keep his or her own equipment in the impound area following the race until the protest has been resolved. Once a competitor's equipment has been removed from the impound area, he or she has waived the right to file a protest on another competitor's equipment regardless of

whether 30 minutes have elapsed from the completion of the race in question. If a driver's finishing position is adversely affected by an incident on the track, the driver cannot be reinstated to his or her previous position. However, this does not prevent the driver from filing a protest after the race to argue a position penalty given by the officials.

### **Review of Go-Pro/Video:**

Video evidence may be viewed by the USPKS Race Director (or designated official) in the event of a protest if time allows. A protest shall be filed and the video must be immediately available for the official to review with the protest if they deem necessary. It will solely be the call of the official if the view provides enough evidence to overturn the call. USPKS may view up to two (2) on-board videos for clarification of an **on-track call**.

### **Probation:**

USPKS officials can place a driver on probation for a set amount of time/races as determined by USPKS. This is normally for rule violations. During this time, the driver's actions will be under review.

### **Suspension:**

USPKS officials can suspend a driver, participant or spectator for a set amount of time/races as determined by USPKS. This is normally for rule violations. During this time the driver, participant or spectator will not be allowed to attend any USPKS events for the period determined.

### **Appeal:**

If a person has been suspended, they can submit an appeal letter to USPKS for the officials to review. The outcome of this review will be the final decision.



**Reinstatement:**

Anyone who has been suspended will be required to meet with a USPKS official or officials before they will be allowed to attend/participate in a USPKS event. The date and time will be determined by USPKS and said individual will be notified accordingly.

**Registration Packet:**

Each driver or guardian shall pick up the registration packet from the USPKS trailer or designated area. The registration packet will contain information required.

**Sponsor Pit Spots:**

Sponsors of the series will receive premier pit spots over non-sponsor participants provided the sponsor contacts the person in charge of the pit spots for each event before the deadline.

**Vendors:**

Vendors that are sponsors of the Series will be permitted to sell supplies at USPKS events as part of the sponsorship package. Vendors that are not sponsors of the Series shall obtain permission to sell supplies and will be charged a fee of \$250.00 per event. Food vendors that are contracted by the Series or track are exempt from this rule.

**Safety:**

- \* Safety attire or equipment including kart can be inspected at any time.
- \* Any safety violation could result in a DQ.

**Helmet:**

Full face helmets with shields attached are mandatory and shall meet one of the following requirements:

| Snell Foundation Specifications | Expiration Date |
|---------------------------------|-----------------|
| CMS 2007 (Youth)                | 12/31/2017      |
| CMR 2007 (Youth)                | 12/31/2017      |
| CMR or CMS 2016 (Youth)         | 12/31/2026      |
| M or SA 2010                    | 12/31/2020      |
| SA 2015                         | 12/31/2025      |
| SFI Specifications              | Expiration Date |
| 24.1/2010 (Youth)               | 12/31/2020      |
| 31.1/2010                       | 12/31/2020      |
| 41.1/2010                       | 12/31/2020      |

The Snell Foundation or SFI sticker must be inside of the helmet. Helmet shall be in good condition with no visible signs of damage and shall be the correct size for the driver per manufacturer's specifications, so it will not come off the driver's head or impair the vision of the driver by moving around. Helmets shall be inspected during pre-race inspection and a safety sticker placed on the helmet once it has been approved. Helmet can also be inspected at any time if it is subjected to damage during an incident on or off the track. If driver has hair that could extend past the shoulders, they shall wear a head sock and tuck hair inside driver suit or jacket to prevent it from getting tangled in any moving parts.



### Neck Collar:

Neck collar shall be worn as manufactured and shall not be altered in any way. If a driver loses their neck collar or it becomes loose while on track, they will be black flagged immediately.

Advanced neck and head supports are highly recommended for drivers of all ages. Approved devices include:

- Leatt-Brace Moto Kart and Moto GPX
- EVS Evolution Race Collar
- Valhalla 360 Plus Device

### Chest & Rib Protectors:

All drivers under the age of 13 years in all divisions are required to wear a chest protection device with [SFI approved specification 20.1](#) at all times they are on the race track. [The SFI tag must be attached to the chest protector.](#)

RECOMMENDED: The use of chest protection is recommended for all types and ages of kart drivers, age 13 and above.

### Driver Attire:

Drivers shall wear ballistic nylon, leather, vinyl or other abrasion resistant jackets with full length pants, gloves, closed toe shoes and socks to limit the chance of abrasion. Sweatpants do not provide adequate protection. Hooded sweatshirts, bandanas or long belts that could become tangled in moving parts are not allowed.

### Cameras:

Cameras [SHALL NOT](#) be mounted on the helmet in any way. Camera should not obstruct the driver's vision or block the view of the number panel in any way. Cameras may be mounted on kart as long as it will bend or break away if hit by another object such as a driver or body part.

### Pre-Practice/Race Inspection:

A Pre-Tech sheet will be included in the registration packet. This sheet shall be filled out completely with initials in all applicable boxes, N/A if not applicable. The Pre-Tech form shall be submitted to the Tech official to

receive the chassis band before entering the track. Only one Pre-Tech sheet per kart, per event will need to be filled out unless competitor changes chassis (see Chassis/Kart Change page 29). All karts shall be inspected and have a chassis band attached after passing inspection and before it will be allowed on the track for practice or racing. Helmets must be inspected and have USPKS safety sticker applied before entering the track.

### \* Route 66 Supplemental Rule:

The Pre-Tech form shall be completely filled out per rule above and submitted to the designated Route 66 official to receive the chassis band before entering the track on race day.

### Pre-Tech Sheet Penalty:

If a postrace inspection is performed on a competitor's kart and infractions are noted the following penalties will be handed out.

- 1 issue = warning
- 2 – 3 issues = 1 position penalty
- 4 – 5 issues = 2 position penalty
- 6 or more issues = 3 position penalty

### Weight:

Weight that is added to the kart to achieve minimum weight for the class shall be white in color. Weight up to and including 6 pounds shall be bolted on with a minimum 5/16" diameter bolt. The bolt shall be double-nutted or have safety wire or a cotter pin inserted through a hole drilled in the bolt to prevent the nut from coming off. Weight over 6 pounds shall have at least two 5/16" or larger bolts, affixing the weight to the kart. The bolts shall be double-nutted or have safety wire or a cotter pin inserted through a hole drilled in the bolt to prevent the nut from coming off. Mounting weight to bumpers, nerf bars, side pods or any component that is not secure shall not be allowed. Driver is not allowed to have any type of additional weight added to their safety attire or body such as exercise weight straps or weight in pockets.



### **Fire Extinguisher:**

It is highly recommended that each entrant in the event have a minimum of one operable 1-1/2 pound dry-powder fire extinguisher (rated for use on A, B, & C type fires) in their pit area. It is recommended that they have one on the starting grid at the start of each race in the hot pit area. Carbon Dioxide type extinguishers are not acceptable substitutes for the dry-powder type.

## **Driver Information:**

### **Basic:**

Drivers must be in good standing with USPKS. Driver must not be under the influence of alcohol or controlled substance. Drivers shall be entered in the correct class for their age, as most of the classes have a minimum and or maximum age limit (see class rules).

### **Minors:**

It is mandatory that drivers under the age of 18 submit a minor's release form signed by the legal guardian at each event. If the parent or legal guardian is not present at the event, the minor's release MUST BE NOTARIZED. Proof of age is also required. This can be a birth certificate, passport, driver's license, or any official document verifying the minor's age. A record of the verification will be kept by the Series. The Series will not retain any copies of these documents. This proof of age is only required once a year **IF** the Series does not already have a record on file.

### **Competition Age:**

The Competition Age of a driver is determined by the driver's actual age at the start of the calendar year (Jan 1st). Any driver meeting the minimum age requirement to move up to the next level by the end of the calendar year is eligible to do so anytime during the year. However, once they compete at the higher level, they may not move back to the lower level. **EXAMPLE:** If a

driver is 15 on Jan 1<sup>st</sup> but will be 16 in July, he/she may stay in Junior or move up to Senior Pro (USPKS).

Falsification of age will lead to disqualification and/or suspension.

\* USPKS has the right to refuse a driver wishing to move up to the next level if they feel it is for the best interest of the driver or Series.

### **Move up Rule:**

A competitor is not allowed to move up from one age group to a higher level, and then back down. Once a competitor moves up they must stay in that class unless USPKS feels it is not in the best interest of the Series.

\*\* In USPKS, Micro Swift competitors who meet the age requirement have the option of running Yamaha Cadet (as there is no Rookie level option). Route 66 competitors entering Micro Swift AND Yamaha Cadet at USPKS have the option of running EITHER Yamaha Rookie or Yamaha Cadet at Route 66, but once they have moved up to Cadet at Route 66, they may not go back to Rookie without the Series approval. Route 66 competitors in Micro Swift that are not competing in USPKS are not eligible to run Yamaha Cadet.

### **Relief Driver:**

A relief driver can be utilized after the driver qualifies the kart and becomes unable to compete (due to illness or injury) in the remaining races for that day after approval by USPKS. The relief driver must start at the rear of the field. The relief driver will be allowed to start the final in the spot they achieved from the heats or pre-final. If the registered driver decides to race after the relief driver has run the heats or pre-final, they will be required to start in the rear of the field. The use of an unapproved driver will result in disqualification and/or suspension of the driver of record by USPKS.



## Race Officials:

### **Series Director:**

Directs event operations, competition, safety, event schedule, and communication. Manages USPKS Race officials.

### **Race Director:**

Oversees on-track activities, imposes penalties, communicates information to competitors and teams.

### **Assistant Race Director:**

Works directly with Race Director to assist with on-track activities, determine penalties, and inform competitors of imposed penalties.

### **Tech Director:**

In charge of pre-race and post-race inspections for both general safety and compliance with technical rules to insure safety and fairness.

### **Chief Scorer:**

Responsible for timing and scoring, broadcasts to RaceMonitor, publishes race results to MyLaps, calculates points and posts results.

### **Grid Steward:**

In charge of following the published schedule, checks to assure all karts and helmets have been inspected, practice sticker and transponder are on kart, as well as releasing the field to the track when track is clear and ready.

## From Grid to Tech:

### **Track Layout:**

All competitors shall observe the track layout and rotation by not cutting across curbs or driving around pylons. Cutting the track or ignoring track layout can result in penalties or disqualification; this includes the cool down lap after the checkered flag has been waved.

### **Number of Karts Allowed on Track:**

USPKS has the right to control the number of karts allowed on the track depending on size of track, speed and level. If it is determined that the number of karts entered in a class is unsafe for the track, the Officials will decide on what actions will be taken to make the racing safe; this could reduce the number of laps for that class. This will be communicated to all in the affected class before any actions are taken.

### **Push Back Nose Inspection:**

Nose cone must be removed for inspection in the pre grid area. No tools are allowed for the removal and re-installation of nose cone. The nose shall be free of holes, with the exception of the OEM hole on the backside. If the nose is worn down excessively, to the point that the bottom of the nose is flexible, the nose will need to be replaced before the competitor will be allowed on track. After inspection is completed the competitor will be required to re-install the nose cone by hand. The intention of this rule is to prevent modifications to the nose cone that will reduce the effectiveness of the push-back bumper system.

### **Pre Grid:**

Nose cone inspection, installing the nose cone and any last minute changes will be done before entering the grid area.



### **Controlled Grid:**

USPKS will allow the driver and one other person to enter the grid area the same time the kart enters the grid. No one else will be allowed in the grid area.

**Route 66** will allow the driver and two other people to enter the grid area the same time the kart enters the grid. No one else will be allowed in the grid area.

\* **No** kart stands, baby strollers or pets are allowed on the grid for either Series.

### **Grid:**

All competitors are responsible to be on the grid on time for their class during practice and races. Their transponder shall be charged and properly mounted on the kart.

### **Quiet Grid:**

Engines shall only be run in the competitor's assigned pit area or adjacent to your assigned pit area (aisle). Running the engine on your way to the grid or on the grid is not permitted.

### **Entering the Track for Qualifying:**

Once the field is released from the grid to begin qualifying, a competitor has 30 seconds to enter the track. If engine fails to start, they have 90 seconds from the time the grid is released to get their kart on track.

### **Race Day 90 Second Rule:**

Heats, Pre-Finals and Finals, driver will have 90 seconds after their class is released from the grid to get their kart started and join the rest of the class on track. The driver and kart must be in their starting position and the driver seated in their kart when the class is released to go on the track for the 90 second rule to go in effect. After the 90 seconds has expired the grid is closed and no karts may enter the racing surface. This rule cannot be used to change tires from dry to wet or wet to dry.

### **Driver Unable to Start:**

If a driver has scratched his entry by notifying Chief Scorer or Race Director, the grid lineup will be adjusted by crossing over from the point of the scratch to the last starting position. If a driver is unable to start the race after the class leaves the grid, the line in which the driver falls out of will move forward; there will be no crossover of positions.

### **Unsportsmanlike or Unsafe Driving:**

Unsportsmanlike actions or unsafe driving will lead to penalties or disqualification. Some examples of unsportsmanlike or unsafe driving are blocking, bumping, chopping, not allowing racing room for other competitors, and driver or crew member actions at the scales. These are only examples and this is not a complete listing of unsportsmanlike or unsafe driving. It is up to the discretion of the Race Director and USPKS officials to determine if a competitor is unsportsmanlike or unsafe.

### **Avoidable Contact:**

It is understood that "light" inadvertent contact will/can occur. However, intentional and aggressive driving, blocking, chopping, and contact will not be tolerated and can result in penalties.

### **Rough Driving:**

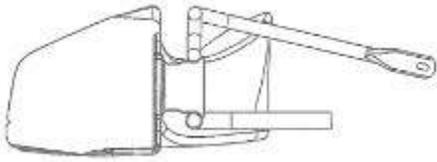
Over aggressive bumping, bump drafting, nerfing, blocking, pushing, etc., could be grounds for disqualification. Competitors must understand there is a fine line between malicious intent and inadvertent contact.

### **Passing After Checkered Flag:**

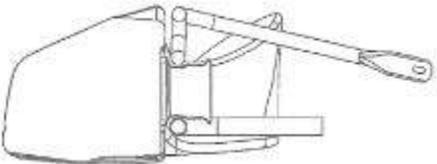
Passing or bumping another competitor after the Checkered Flag could result in penalties.

**Push Back Nose Cone Penalties:**

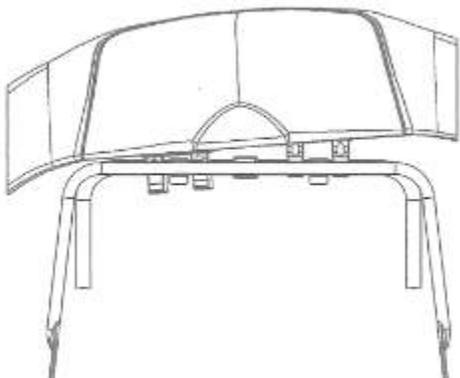
Push back mounts shall remain in the correct position during any time of competition, i.e. qualifying or races. If the mount is pushed in as pictured below, the competitor will receive a 10 second penalty for that session. Drivers should take care to allow enough distance between themselves and the kart in front of them during warm up and pace laps, and scale line to prevent accidental contact. Intentionally dislodging another competitor's nose cone will be considered unsportsmanlike conduct and subject to penalty. The Black Flag with Orange Circle will **NOT** be given to any competitor whose nose cone is no longer in the correct position. Any competitor that tries to put the nose cone back to its correct position while on track or before crossing the scale will be DQ'ed for that race.



**Correct Position**



**Incorrect Position**



**Incorrect Position**

**Penalties:**

Overall finishing position penalties of a race/qualifying event can consist of: time penalties, position penalty, being placed behind the victim of the incident, sitting out a session or race, or disqualification for improper/unsafe driving, or unapproved use of track. Penalties will be published on results.

**Practice:**

Drivers will practice with their class. If a driver practices with another class without USPKS approval they will be penalized. Testing Monday thru Thursday the week of the event will not be permitted at the track at which the event will be held. Anyone violating this rule will not be allowed to practice on Friday. Furthermore, they must participate in qualifying on Saturday and Sunday and start at the back of both of the heat races or pre final on both days. Starting position for the finals will be based on the accumulated points they received from the heat races or pre final. Anything outside of a concession rental kart is not allowed.

**Lapped Competitor:**

**USPKS** – In all classes a competitor that is about to be lapped will be black flagged. The competitor will be placed in the on track position at the time of the black flag and receive points for that position.

**Route 66** – A driver that is being lapped shall allow the lead karts the preferred racing line to complete the pass. If competitor is about to be lapped a second time they will be black flagged. The competitor will be placed in the on track position at the time of the black flag and receive points for that position. Route 66 Officials have the right to black flag a competitor the first time if they feel the competitor could endanger another competitor or be a danger to themselves.

\* If a competitor ignores the black flag and number board after (3) three laps scoring will stop and the competitor will be DQ'ed.



### **Slowing or Stopping on Race Track:**

If your kart slows from racing speed during practice or a race due to mechanical issues, or to exit the race course, the driver shall raise a hand above their head and wave to alert other drivers behind them. If a kart comes to a stop on the race track during practice or during a race, the driver shall raise a hand above their head and wave to alert other drivers. When safe to do so the driver must exit their kart and remove it from the racing surface.

### **Exiting Your Kart on Track:**

KA100, X30 Jr. and X30 Pro/Senior competitors are allowed to exit their kart to untangle, or free their kart from an object, providing the engine is off before exiting the kart. Once the kart is free, the competitor must be safely seated in kart before safely rejoining the race. If you become lapped while stopped, you may not rejoin the race. (See Re-entering the Racing Surface below) All other classes are not allowed to exit their kart and continue the race. All competitors are expected to exit their kart to help clear the track.

### **Re-entering the Racing Surface:**

Other than leaving the grid area, if a driver leaves the racing surface during practice or a race they should re-enter the racing surface at a point not in the racing groove, for example on a straightaway or other spot that can be done safely and not obstruct another driver. When re-entering, the driver shall yield to drivers on the racing surface. The driver shall not advance any positions or gain any advantage during this time. Race officials will be critical of re-entry safety.

### **Restarting Motor:**

After leaving the grid area IAME motors may be restarted with the onboard starter and rejoin at the end of the field or re-enter the racing surface at a point not in the racing groove, for example on a straightaway or other spot that can be done safely and not obstruct another driver. The driver shall not advance any positions or gain any advantage during this time. Any kart that does not have an onboard starter will not be allowed to restart after leaving the grid unless it is after a red flag.

### **No Passing Area (waving yellow flag):**

If a waving yellow flag is displayed, passing is not allowed in that area.

### **Karts/Drivers Involved in Red Flag:**

Driver's safety equipment and kart may be inspected by USPKS if they are involved directly or indirectly in a red flag incident. The Race Director has the right to prohibit a driver from restarting a race if he feels it is not safe for them to do so. Working on karts under a red flag is not allowed unless a complete restart has been determined by USPKS officials and permission has been given. If any work or repairs are performed during a red flag stoppage, it must be approved by a USPKS official and the driver will start at the back of the field. If a driver is unable to "leave" with the rest of the field during the restart procedure, there is no 90 second rule; he/she will not be allowed to continue. If a driver cannot weigh in with their kart due to medical personnel examining the driver, the Race Director can waive the weigh-in requirement at the scales and the driver will receive points for their finishing position.



### **Loose or Missing Components:**

All components shall be fastened and in place at the start of a race prior to the green flag; if not, a competitor could be black flagged. All karts must finish the race with all components subject to tech still intact in the manner the rule specifies. Any competitor that loses a 'spec' or 'tech-able' component may be black flagged. Examples include a nose, side pod, bumper or exhaust. A loose but intact exhaust may be black flagged. When leaving the grid, rear bumpers must be securely attached to the kart as designed by the manufacturer. Aftermarket bumper safety kits, or other means that keep the bumper secured in its original location are acceptable, even if the bumper itself drags on the track in the event of a broken bumper bolt while on the track. Bumpers **WILL NOT** be allowed to drag more than a few inches beyond the normal mounting location. If bumper becomes completely detached from one side of the kart, or is deemed unsafe by track officials, it will be grounds for a mechanical black flag and/or disqualification. The spirit and intent of this rule is to allow racers to continue on with a broken bumper bolt, as long as it remains safe.

### **Restarts:**

The starting order after a red flag will be determined by the running order of the last completed lap. The kart or karts causing or directly involved in the red flag will be placed at the back of the starting order. A completed lap is after all karts on the lead lap have crossed the finish line or scoring loop.

### **Exiting the Race Track:**

After the checkered flag has been displayed all drivers shall exit the track at the designated area. After each race all drivers are responsible for crossing the scales and reporting to post-race inspection if required. Any driver not crossing scales or missing post-race tech will be disqualified.

### **Completed Race:**

A race could be considered complete after one lap has been completed in situations of a red flag, poor weather, time limits or other extenuating circumstances. Should this occur, scoring will go to the last completed lap. Every effort will be made by USPKS to complete every lap of every race. If the checkered flag appears before (or after) the last scheduled lap, the finishing positions of the field will revert to the final completed lap. Drivers are expected to race to the checkered flag. In the event of a red flag displayed with the checkered flag, any karts crossing the finish line (scoring loop) and receiving the checkered flag before the red flag was displayed will be scored as they finished. All remaining karts crossing the finish line with the checkered and red flags displayed will also be scored based as they finished. All other competitors will be scored on their positions for the last completed lap. The competitors responsible for the red flag will be scored at the rear of the last completed lap or possibly disqualified, depending on circumstances. A lap is considered to be complete when all competitors on the lead lap have crossed the finish line (scoring loop).

### **Incomplete Race:**

If the event cannot be completed due to weather or other circumstances, points and awards will be given based on the total points accumulated from qualifying results and heat races that have been completed. For any class that did not complete qualifying, entrants shall be awarded 200 points.

**\* Route 66 - Final results will be based on completion of the last competition session (i.e. qualifying or pre-final).**

### **Combining Classes:**

USPKS has the right to combine classes. Lap times and experience will be taken into account in making this determination.



### **Event Format:**

Every effort will be made to follow the timeline that will be published and distributed at registration.

### **Qualifying:**

Qualifying will be by class for a set amount of time. The Race Director will determine the time allowed and the number of karts allowed on track for a qualifying session. If the class is split into two groups for qualifying it is the driver's responsibility to know what group he is in and what time to be on the grid. This will be posted on the lineup/results board.

### **Heat Races:**

USPKS - Two heat races will be run per class. The grid lineup for the 1<sup>st</sup> heat will be determined from qualifying sessions; 2<sup>nd</sup> heat lineups will be progressive, (finishing position of 1<sup>st</sup> heat is your starting position). This procedure could change if published for the event or for unforeseen reason that could not be otherwise corrected.

### **Pre Finals:**

The grid lineup for the pre finals will be determined from qualifying sessions.

### **Finals:**

Grid lineups for the Final races will be based on points acquired from heat race or pre final finishing positions, as an accumulation from both heat races. A tie breaker is determined from qualifying order.

### **Driving on the Scale:**

All karts shall come to a complete stop before entering onto the scale. Any driver that drives their kart on the scale, engine running or not, and has to use their brakes to stop on the scale could be penalized or DQ'ed.

### **Clearing the Scale:**

All drivers must cross the scale after each official scored qualifying session and race. They must meet the minimum weight per class. Any competitor not meeting the minimum

weight or does not cross the scales will be DQ'ed unless the Race Director has waived this requirement due to injury or illness. No one but the driver is allowed to touch the kart until it has cleared the scale, unless otherwise approved by USPKS.

### **Reporting to Tech:**

The top five (5) of each official scored qualifying session and race shall report to the tech area and not leave until released by one of the tech officials. The tech officials have the right to check as few or as many karts as they deem necessary.

### **Tech Area:**

Only the driver and one tuner/mechanic is allowed in the tech area unless cleared by one of the tech officials.

### **Failure to Report to Tech:**

Failure to report to tech could lead to disqualification and/or suspension.

### **Refusal of Tech:**

Refusal of tech could lead to disqualification and/or suspension.

### **Impound Parts or Equipment:**

USPKS has the right to impound any parts or equipment for further inspection. If no issues were identified after further inspection, the parts or equipment will be returned to the competitor. If parts or equipment are found illegal USPKS has the right to keep the parts or equipment and penalties up to and including suspension could be handed out from the result of the inspection. This includes any items found during tech or inspection.

### **Scoring:**

Scoring results are official. Data acquisition will not supersede official results.



**Scoring Protests:**

Error in points must be contested within two (2) weeks of posting by contacting Chief Scorer.

**Championship Points:**

All classes run for a single points championship. Championship points are based on pole position, finishing order in each of the two heat races and the final.

**USPKS** – All points are accumulated toward Championship with one drop counting 7 of the 8 races. A disqualification can be used as a drop unless the DQ is for unsportsmanlike conduct, or the use of remanufactured or counterfeit parts. If a competitor is deemed in violation of the spirit and intent rule he or she may be disqualified netting zero points for the day in the class of the DQ without the option of dropping that race from the season points total if applicable. 22 bonus points are awarded to each competitor that attends all 8 competition days of the scheduled USPKS events.

**\* Route 66 Supplemental Rules:**

1. All classes run for a single points championship. Championship points are based on pole position, finishing order in the pre final and the final. Two drops are allowed for the season. They do NOT need to be on the same weekend as all race days are considered a complete event. One disqualification can be used as a drop per season unless the DQ is for unsportsmanlike conduct, or the use of remanufactured or counterfeit parts. If a competitor is deemed in violation of the spirit and intent rule he or she may be disqualified netting zero points for the day in the class of the DQ without the option of dropping that race from the season points total if applicable. 22 bonus points are awarded to each competitor that attends all 10 competition days of the scheduled Route 66 events.
2. Competitor must attend any 8 of 10 scheduled race events in order to qualify for Championship Awards.

3. Top 10 finishing positions are what are traditionally recognized at the Banquet; however everyone is welcome and eligible for the raffle prizes. Top place finishers must attend the Banquet to accept their earned trophy and awards.

**Pole Position: 10 points**

**Heat Race and Pre Final Race Points:**

|                    |                     |                     |                    |
|--------------------|---------------------|---------------------|--------------------|
| 1 <sup>st</sup> 50 | 6 <sup>th</sup> 31  | 11 <sup>th</sup> 19 | 16 <sup>th</sup> 9 |
| 2 <sup>nd</sup> 45 | 7 <sup>th</sup> 28  | 12 <sup>th</sup> 17 | 17 <sup>th</sup> 7 |
| 3 <sup>rd</sup> 40 | 8 <sup>th</sup> 25  | 13 <sup>th</sup> 15 | 18 <sup>th</sup> 5 |
| 4 <sup>th</sup> 37 | 9 <sup>th</sup> 23  | 14 <sup>th</sup> 13 | 19 <sup>th</sup> 3 |
| 5 <sup>th</sup> 34 | 10 <sup>th</sup> 21 | 15 <sup>th</sup> 11 | 20 <sup>th</sup> 1 |

**Final Race Points:**

|                  |                         |
|------------------|-------------------------|
| 1 <sup>st</sup>  | 200 + number of entries |
| 2 <sup>nd</sup>  | 180 + number of entries |
| 3 <sup>rd</sup>  | 170 + number of entries |
| 4 <sup>th</sup>  | 160 + number of entries |
| 5 <sup>th</sup>  | 150 + number of entries |
| 6 <sup>th</sup>  | 140 + number of entries |
| 7 <sup>th</sup>  | 132 + number of entries |
| 8 <sup>th</sup>  | 124 + number of entries |
| 9 <sup>th</sup>  | 116 + number of entries |
| 10 <sup>th</sup> | 108 + number of entries |
| 11 <sup>th</sup> | 100 + number of entries |
| 12 <sup>th</sup> | 94 + number of entries  |
| 13 <sup>th</sup> | 88 + number of entries  |
| 14 <sup>th</sup> | 82 + number of entries  |
| 15 <sup>th</sup> | 76 + number of entries  |
| 16 <sup>th</sup> | 70 + number of entries  |
| 17 <sup>th</sup> | 64 + number of entries  |
| 18 <sup>th</sup> | 60 + number of entries  |
| 19 <sup>th</sup> | 56 + number of entries  |
| 20 <sup>th</sup> | 52 + number of entries  |
| 21 <sup>st</sup> | 48 + number of entries  |
| 22 <sup>nd</sup> | 44 + number of entries  |
| 23 <sup>rd</sup> | 40 + number of entries  |
| 24 <sup>th</sup> | 36 + number of entries  |



|                  |                        |
|------------------|------------------------|
| 25 <sup>th</sup> | 34 + number of entries |
| 26 <sup>th</sup> | 32 + number of entries |
| 27 <sup>th</sup> | 30 + number of entries |
| 28 <sup>th</sup> | 28 + number of entries |
| 29 <sup>th</sup> | 26 + number of entries |
| 30 <sup>th</sup> | 24 + number of entries |
| 31 <sup>st</sup> | 22 + number of entries |
| 32 <sup>nd</sup> | 20 + number of entries |
| 33 <sup>rd</sup> | 19 + number of entries |
| 34 <sup>th</sup> | 18 + number of entries |
| 35 <sup>th</sup> | 17 + number of entries |
| 36 <sup>th</sup> | 16 + number of entries |
| 37 <sup>th</sup> | 15 + number of entries |
| 38 <sup>th</sup> | 14 + number of entries |
| 39 <sup>th</sup> | 13 + number of entries |
| 40 <sup>th</sup> | 12 + number of entries |

#### Scoring Abbreviations:

**DNS** – (Did not start) A competitor who is a DNS shall be awarded last place points. If more than one competitor is a DNS, then the finishing tiebreaker shall be according to their respective qualifying position.

**DNF** – (Did not finish) A competitor who takes the green flag but becomes a DNF shall be awarded points based on their position at the end of the race. A competitor who is a DNF but does not take the green flag shall be considered a DNS and awarded points in accordance with the DNS point rule.

**DQ** – No points

#### Penalized Starting Positions:

**DQ after qualifying** – Starts in rear of both heats or pre-final. Starts final from acquired heat race points or finishing position from pre-final.

**Penalized in 1<sup>st</sup> heat** – Receives points for penalized position and starts 2<sup>nd</sup> heat in the penalized position from the 1<sup>st</sup> heat. Starts final from acquired heat race points.

**DQ after 1<sup>st</sup> heat** – Receives zero points for 1<sup>st</sup> heat toward accumulated points for final line-up. Starts 2<sup>nd</sup> heat in the rear. Starts final from acquired heat race points.

**Penalized in 2<sup>nd</sup> heat** – Receives points for penalized position. Starts final from acquired heat race points.

**DQ after 2<sup>nd</sup> heat** – Receives zero points for 2<sup>nd</sup> heat toward accumulated points for the final line-up. Starts final from acquired heat race points.

**Penalized in pre-final** – Starts final from the penalized position.

**DQ in pre-final** – Starts in rear of final

**Penalized in final** – Receives points for penalized position.

**DQ in final** – Receives zero points.

#### Tie Breaker:

If there is a tie at the finish of a race the tie will be broken by reverting back to qualifying. The person that qualified the highest will receive the higher finishing position of the tie. If a tie is still present, then they will use the finishing position of the previous race of that event. If there is a tie in the final points championship between two or more drivers, each driver will receive one point for each of the items listed below step by step until the tie is broken. If one driver gets two points and the other driver gets one point in the first step, then the driver that received two points would be the champion. If it is still tied the process will continue until the tie is broken.

- Step 1) Number of Final Wins
- Step 2) Number of Wins, Heats and Pre-Finals
- Step 3) Number of Fast Time Awards
- Step 4) Number of Final 2<sup>nd</sup> Place Finishes
- Step 5) Number of 2<sup>nd</sup> Place Finishes, Heats and Pre-Finals
- Step 6) Number of Final 3<sup>rd</sup> Place Finishes
- Step 7) Number of 3<sup>rd</sup> Place Finishes, Heats and Pre-Finals

And so on until the tie is broken.

#### Year End Awards:

All year end awards/certificates shall be used with sponsors of the USPKS or Route 66 Series.



## Flags:

### **Green Flag:**

A green flag lets competitors know the track is clear for practice or competition; it is also used to start or restart a race.

### **Yellow Flag:**

A yellow flag alerts competitors of an unsafe condition in that part of the track. A waving yellow flag means there is trouble on the track. Drivers are to hold their position in these areas and shall not pass another competitor until they have passed the waving caution area. A standing yellow is an "advisory" and means there is possible danger near the racing surface. Passing is allowed when a standing yellow is displayed. When a double yellow flag is displayed by the starter it signifies a full course caution. Drivers shall proceed at a moderate pace with no passing allowed.

### **Red Flag:**

A red flag alerts competitors of a halt to racing and to stop as soon as they can do so safely. Drivers may be directed to proceed to the front stretch or other designated area if it can be done safely. Corner workers will wave yellow and black flags to indicate a red flag situation. Any driver disobeying a red flag shall be disqualified. Participants, crew or family members are not allowed on the racing surface during a red flag.

### **Crossed Flags:**

A crossed white and green flag indicates the race has reached the halfway point.

### **Two Rolled Flags:**

Two rolled flags (green and white) are used to let the competitors know there are two laps remaining in that race.

### **White Flag:**

A white flag lets competitors know they are starting the last lap of the race. If the white flag has been waved the checkered flag will follow even if it is waved with another flag, i.e. red, yellow or black.

### **Checkered Flag:**

The checkered flag indicates the race or practice session has concluded, and all competitors shall slow down to a moderate pace, and safely proceed to the scale or pit area as required to do so.

### **Waving Checkered with Red:**

A waving checkered with a waving red is used to alert the competitors of trouble on the racing surface. Racing back to the start/finish line is not allowed. Competitors shall proceed to the finish line if it can be done safely and follow the direction of corner workers. Scoring will revert to the last completed lap.

### **Black Flag:**

A waving black flag is used to inform a competitor they need to exit the race course and proceed to the scale or pit area due to a rule infraction; the flagman will make every attempt to display the kart number of the driver receiving the black flag. If a competitor ignores a black flag it could lead to additional penalties. A rolled black flag is a warning usually given for unsafe or unsportsmanlike driving. If the actions continue it could lead to a waving black flag and disqualification.



### **Black Flag with Orange Circle:**

A waving black flag with orange circle is used to inform a competitor of a mechanical or tech issue. The driver should exit the race course and proceed to the scale. The flagman will make every attempt to display the kart number of the driver receiving the black flag with orange circle. If the competitor exits the race course/track prior to receiving the checkered flag, the competitor will be scored with a DNF (Did Not Finish) and be awarded points based on their position at the end of the race. If the competitor does not exit the track in a timely manner or ignores the black flag with orange circle, scoring will stop and the competitor will be DQ'ed.

### **Blue Flag:**

A blue flag is used to alert competitor that they are about to be lapped and shall allow the lead karts the preferred racing line to complete the pass.

### **Kart:**

**\* Note: All measurements are in inches unless otherwise stated.**

### **Frame:**

Main frame shall be round tubing with a minimum diameter of 1.0" and maximum diameter of 1.4". Minimum wall thickness for 1" diameter tubing is .078" and, for 1.125" or greater diameter tubing minimum wall thickness is .060". Frame tubing shall be minimum cold rolled or electric welded tubing or tubing of equal strength.

### **Floor Pan:**

Floor/belly pan is required; a full floor pan is legal provided it does not extend outside of the frame from front to rear or from side to side, this includes during rain condition. The floor/belly pan must not extend above center line of axle.

### **Steering:**

Direct mechanical type steering is required; vertical shaft or rack and pinion steering is illegal. Steering shafts shall be attached at bottom with a minimum 5/16" fastener that is drilled with safety wire/cotter pin inserted (safety wire cannot be wrapped around the bolt), or machined for e-clips with e-clips installed. Minimum diameter for solid steering shaft is 0.625" and for a hollow shaft it is 0.700". Minimum diameter for steering wheel hub bolt is 1/4" grade 5 and must be drilled with safety wire/cotter pin inserted (safety wire cannot be wrapped around the bolt), or machined for e-clips with e-clips properly installed. All steering component bolts shall be a minimum of 1/4" grade 5 bolts that are drilled with safety wire/cotter pin inserted (safety wire cannot be wrapped around the bolt), or machined for e-clips with e-clips properly installed. The rods shall swivel at both ends and be made of steel or aluminum. Steering wheel must be round in shape with a minimum of three spokes and 10" diameter. The top third of the wheel may be flat or open but they must be designed that way and cannot be altered. Shaft adapters that change the angle of the steering wheel are legal.

### **Axle:**

The axle must be a one piece axle; it can be solid or tubular with a minimum diameter of 25mm, a maximum diameter of 50mm and a minimum wall thickness of 0.075". Carbon fiber or carbon fiber composite axles are not allowed. Stiffeners are allowed if they are secured with bolts that are drilled for cotter pin or safety wire or machined for spring clips or e-clips; with the above mentioned properly installed (cotter pin, safety wire, or e-clip). Snap ring grooves, or any machining other than for keyway, are not allowed anywhere in the area between the left and right wheel hubs. Axle shall not extend past the outside edge of the wheel. Maximum width of rear track at widest point is 55 1/8".

### Brakes:

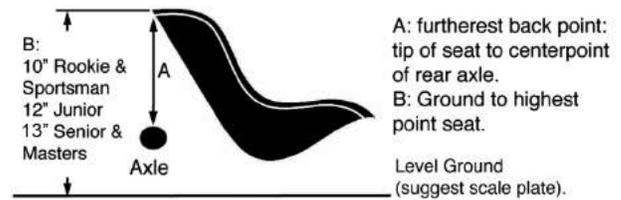
The brakes shall at least stop the rear wheels. Brake pedal, master cylinder, and brake caliper must be attached to the main frame with bolts that are drilled with safety wire/cotter pin inserted (safety wire cannot be wrapped around the bolt), or machined for e-clips with e-clips properly installed. Brake rotor must be attached to the brake hub with a minimum of three bolts that are drilled with safety wire/cotter pin inserted (safety wire cannot be wrapped around the bolt), or machined for e-clips with e-clips properly installed, or steel lock nuts on a minimum of three bolts; nylon lock nuts are not allowed on the brake rotor. The linkage from brake pedal to master cylinder or brake bias must be either 6mm or larger steel rod with clevis or heim joint fittings with jam nuts on each end or kart manufactured cable that is a minimum diameter of 2.5mm. NOTE: If secondary cable is used nylon locknuts may be used in place of drilling or machining bolts for actuating rod and secondary cable. Scrub or band-type brakes are not allowed. Dual system or four wheel brakes are allowed. If a dual system is used it must be two separate brake systems; if a brake bias is used it must not affect either system if one would fail. Brake components must be steel or aluminum; ceramic, carbon fiber or such materials are not allowed. Hydraulic connections must be clean and tight with no leaks and routed to prevent damage while operating kart. Hand brakes are not allowed. An exception may be requested for a driver with a disability and must be approved by USPKS.

### Seat:

Seat shall be a molded, one piece sprint bucket design and be the correct size for the driver so they cannot move or slide from side to side in a manner that could be unsafe or to gain an advantage from aerodynamics. Lay down type seats are illegal. Seat cannot be cut in any way to add or remove material and shall be in safe condition, e.g., the bottom is not weak or broken. Bottom of seat shall be between the frame rails and either mounted above or below the frame rails. Seat shall be mounted to

the kart in a minimum of four spots with front of seat being higher than the bottom. Adjustable seats that can be moved while on track are illegal. See chart and following Figure for dimensions. Seat belts or other restraints are illegal.

\* Repairing the bottom of the seat from rubbing on the track is allowed.



### Suspension:

Suspension components are not allowed, for example, springs, shocks or other components.

### Wheel Hubs:

Wheel hubs must be made from metallic materials with wheel studs having a minimum diameter of 0.3125".

### Spindles:

Front spindles must be drilled for cotter pin or safety wire or machined for spring clips or e-clips; with the above mentioned properly installed (cotter pin, safety wire, or e-clip).

### Wheel Bearings:

Split race bearings are not allowed. Bearings must be ground ball or roller bearings. Bearings must be adjusted to remove excessive play.

### Wheels:

Must be 5" diameter, as manufactured (no drilling or removing material) and proven to withstand the force and strain of the racing condition. Lateral supported wheels or g-rings will not be allowed. Maximum width of rear track at widest point is 55 1/8" unless specified under class structure or supplemental rules.



### Wheel Weights:

Wheel weights are allowed with each piece not to exceed ¼ ounce. Placing duct tape over weights to secure is suggested for extra safety.

### Throttle Spring:

Positive acting throttle return spring is required on all karts.

### Fuel System:

One fuel tank maximum per kart. Fuel tank must be puncture resistant and leak proof when the fill cap is on. Maximum capacity is nine liters. Tank must be within the frame and under the steering shaft, mounted to either the steering uprights or floor pan. Pressurized fuel system or any fuel pumps other than a pulse pump in the carburetor is illegal.

### Fuel Line:

All fuel line connections shall be attached with cable tie, safety wire or other approved fastener and shall not be in excessive length or size.

### Chain:

Chain sizes allowed are #219 or #35. Chain oilers are not allowed.

### Chain Guard:

All karts are required to have a chain guard. Yamaha classes are required to have a chain guard that runs from approximately the center of the axle, back and down to the frame rail. Plastic strip with metal brackets is recommended as pictured below or full chain guard can be used.



It is recommended that IAME classes use a full chain guard as pictured below.



### Bodywork Components:

CIK appearing bodies, CIK homologated, and aftermarket bodywork that is made from CIK-similar material are allowed. Bodywork is defined as two side pods, nose cone and driver fairing and all pieces are required in all classes. No part of the bodywork can be used as a fuel tank. No weight or ballast can be placed inside or on the bodywork. Cutting the bodywork for the starter hole and or radiator in the TAG class is the only cutting that is allowed. Bodywork must be properly attached and appear neat. Any bodywork that appears loose or that may fall off while on the track could be cause for a black flag.

**\* Cadet bodywork including the nose shall be used on Cadet Karts.**

### Front Bumper:

Two steel tubes are required for the front bumper: top tube must be a minimum diameter of 0.625" and attached to the frame at each end, bottom tube must be a minimum diameter of 0.750", both tubes shall have a minimal wall thickness of 0.630" and attached to the frame at each end. Both tubes must be used to attach the nose cone to the kart. If pedals are mounted to the bottom tube it must be welded or through-bolted to the frame.

### Nose Cone:

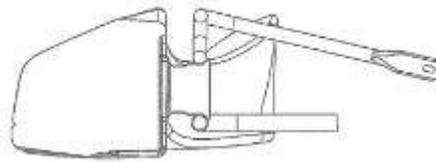
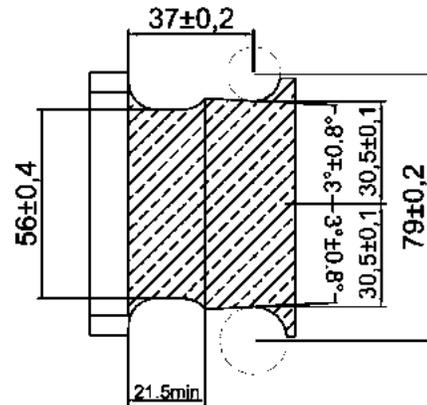
The nose cone can be mounted with butterfly clamps. If nose cone comes off while on track before receiving checkered flag, competitor will receive the black flag. Nose cones must be used as manufactured and cannot be altered in any way. Nose cones that are made for front brakes are allowed if kart has front brakes. Bottom of nose shall be a minimum one-half inch (1/2") off the ground and top of nose shall not be above the top of the front tires. Minimum nose width is 39 3/8"; maximum width cannot be wider than the front tires. Maximum overhang from center of front axle to tip of the nose cone is 26 3/4". Measurements will be performed with wheels straight ahead and without driver in kart.

**\* Cadet nose shall be used on Cadet Karts.**

### Push Back Nose Cone Mounts:

All karts shall use the push back nose cone mounts. May be compared to known OEM part in case of discrepancy, dimensions below.

**\* Not required on Kid Karts**



### Side Pods and Nerf Bars:

Side pods must be mounted with the intended manufactured nerf bar for the side pod that is being used. Side pod cannot cover any part of the driver or frame. If side pod comes off while on track competitor will receive the black flag. Bottom shall be a minimum of 1/2" and maximum of 2 5/8" above the ground and shall be no more than 2 5/8" from rear tire or 5 7/8" from front tire. Only the rear tire is allowed inside of side pod. Maximum width of side pods is 55 1/8". Measurements will be performed with wheels straight ahead. Nerf bars shall be steel tubing with a minimum diameter of 0.630" and attached to the frame at two (2) points.

**\* Cadet side pods shall be used on Cadet Karts.**



### **Driver Fairing:**

The driver fairing must be mounted with bendable material that is attached to the uprights, frame or floor pan and cannot expose any sharp edges that could harm the driver. No part of the fairing shall extend more than 1" above the top of the steering wheel; and shall be a minimum of 1 15/16" from any part of the steering wheel. Minimum fairing width is 9 7/8"; maximum width is 11 13/16". Measurements will be performed with wheels straight ahead, height of fairing will be checked on scales. If an official feels that the height of the fairing is hindering the driver's vision, the fairing must be lowered.

**\* Cadet driver fairing shall be used on Cadet Karts.**

### **Rear Bumper:**

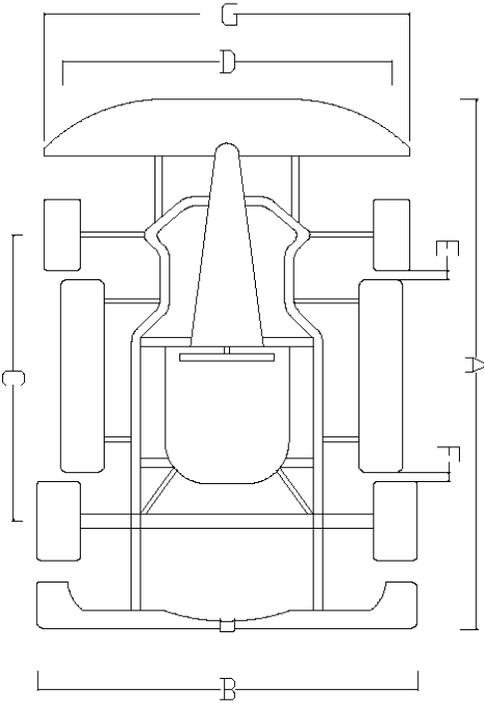
CIK style PLASTIC rear bumpers are mandatory in all classes. Bumper shall be a minimum of 1" behind tire as raced. Adjustable width bumpers are legal and recommended as long as they meet the requirements. The bumper shall cover at least 50% of each rear tire and shall not extend outside of the rear wheel/tire. The only time the bumper may extend beyond outside of rear tire width as raced shall be when the competitor uses the spec rain tire after the USPKS determines competitor's choice of tires or the USPKS determines wet conditions.

### **Numbers:**

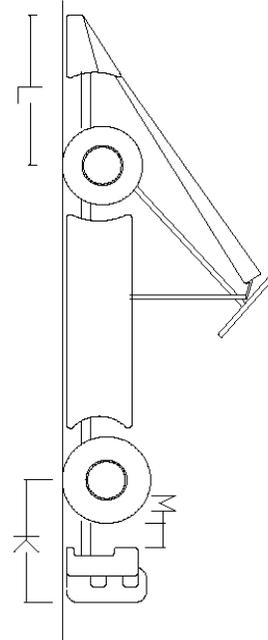
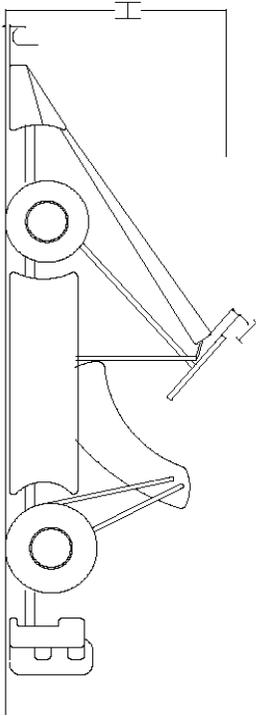
All karts shall have legible and adequate size numbers with an adequate size white, yellow or contrasting background on driver fairing, both side pods and rear bumper prior to entering the track. All karts shall use the number that was assigned to the driver at registration and numbers will consist of one to three digits only. We do not use letters for scoring, they are not acceptable.

### **Rear View Mirrors:**

Rear view mirrors are not allowed on any karts.



| <b>Kart Dimensions</b>   |   |   |
|--|---|---|
| <b>All Measurement Are Done With Wheels Straight Ahead and No Driver</b> |   |   |
| <b>Letter</b>  | <b>Description</b>                      | <b>Measurement</b>  |
| <b>A</b>   | Cadet Maximum Length                    | 71"   |
|  | Standard Maximum Length                 | 82"   |
| <b>B</b>   | Maximum Rear Wheel Outside Width        | 55 1/8"   |
|  | Minimum Rear Bumper Width               | 52 13/16"   |
|  | Maximum Rear Bumper Width               | Bumper should not extend past outside edge of rear tires except in rain setup |
| <b>C</b>   | Cadet Minimum Wheel Base                | 35"   |
|  | Cadet Maximum Wheel Base                | 41"   |
|  | Standard Minimum Wheel Base             | 39 3/4"   |
|  | Standard Maximum Wheel Base             | 43"   |
| <b>D</b>   | Minimum Front Width Center to Center    | 28"   |
| <b>E</b>   | Maximum Between Front Tire and Side Pod | 5 7/8"  |
| <b>F</b>   | Maximum Between Rear Tire and Side Pod  | 2 5/8"  |
| <b>G</b>   | Minimum Nose Cone Width                 | 39 3/8"   |
|  | Maximum Nose Cone Width                 | Cannot be wider than outside edge of front tires                              |



| <b>Kart Dimensions</b>   |  |                    |
|--|--|--------------------|
| <b>All Measurement Are Done With Wheels Straight Ahead and No Driver</b> |  |                    |
| <b>Letter</b>  | <b>Description</b>   | <b>Measurement</b> |
| <b>H</b>   | Maximum Height   | 26"                |
| <b>I</b>   | Minimum Between Steering Wheel and Fairing                     | 1 15/16"           |
| <b>J</b>   | Minimum Between Ground to Nose and Ground to Front of Side Pod | 1/2"               |
|  | Maximum Between Ground to Nose and Ground to Front of Side Pod | 2 5/8"             |

| <b>Kart Dimensions</b>   |   |          |
|--|---|----------|
| <b>All Measurement Are Done With Wheels Straight Ahead and No Driver</b> |   |          |
| <b>K</b>   | Maximum Center of Rear Axle to Back of Bumper | 15 1/2"  |
| <b>L</b>   | Maximum Center of Front Axle to Front of Nose | 26 9/16" |
| <b>M</b>   | Minimum Between Rear Tire and Bumper          | 1"       |



## Miscellaneous:

### **Tires (Slicks):**

MG spec tires shall be used; MG "HZ" Reds 4.60 & 7.10 shall be CIKF/Z Option; MG "FZ" Yellows 4.60 & 7.10 shall be CIKF/Z Prime; see class specifications for type and size. Tire treatments of any kind and/or tire warmers are illegal. All classes shall run the same tires both days except for IAME X30 Junior and IAME 125 Pro/Senior. IAME X30 Junior and IAME 125 Pro/Senior shall run new tires both days. You must run the first day at each track to be eligible to run the second day except IAME X30 Junior and IAME 125 Pro/Senior, they can run one or two days.

**\* All competitors must take all tires with them at the end of the event or they will be charged for any disposal fees.**

### **\* Route 66 Supplemental Rule:**

Sunday only entry for IAME Swift and Yamaha classes must run approved used tires by Route 66 Race Director or Tech Director and will be subject to inspection at any time during the event. These tires will be provided by Franklin Motorsports. Or the competitor must notify Tech on practice day, run race day tires during practice and then Tech will impound the tires until qualifying.

### **Rain Tires:**

MG spec tires shall be used; see class specifications for type and size. Tire treatments of any kind and/or tire warmers are illegal. Each class will be allowed eight (8) spec rain tires per class per day.

### **Slick or Rain Tire Condition:**

If a race is started in dry conditions, and rain begins causing it to become too wet or unsafe, the race can be stopped to allow competitors to change to rain tires. Pit stops are not allowed. A minimal amount of time will be allowed for that change to occur. When USPKS determines wet conditions, all competitors will use the spec rain tire for their class. The first class that this affects will have a minimum of fifteen (15) minutes to change from

dry to wet setup or from wet to dry setup if USPKS determines wet or dry condition. If USPKS determines competitor's choice, the competitor is responsible for determining if they would like to compete on spec rain tires or spec slick tires. If a race is started in dry conditions, but wet weather is imminent and competitor's choice has been declared resulting in the field being a mix of slicks and rain tires, the race will not be stopped so as to not take away the strategic decision/advantage by these competitors. An exception may occur if it is determined by USPKS officials that conditions have become too unsafe for even those on rain tires. All four tires must be slicks or rains; mixing slicks and rains is not allowed.

### **Tire Scanning:**

Tire scanning shall be done before 6:00pm on Friday outside of late entries. Anyone that fails to scan tires before 6:00pm Friday loses the right to protest for both days of the event and will receive a two position penalty added on to their qualifying spot for both days of the event.

### **\* Route 66 Supplemental Rule:**

If the competitor fails to get their tires scanned on Friday they will get one warning for the season and then a one position penalty after that.

### **Reducing Race Length (in Wet):**

If USPKS officials declare wet conditions, all competition sessions (races) may have laps reduced by 20% for each session. The Series will make every effort to resume published lap counts if conditions allow the return to "Competitors Choice." Series officials reserve the right to adjust lap counts for extenuating circumstances.

**Fuel:**

All classes shall run the USPKS designated spec fuel Sunoco 110 that is supplied at each track. Refusal or failure to pass the fuel test will lead to disqualification or suspension. Some fuel testing procedures being used are Digation, hydrometer and visual. Tech officials will use these and any other necessary means to declare all fuels legal.

**Oil:**

Red Line is the spec oil: Two-Stroke Kart Oil or Two-Stroke Racing Oil. Must use 6 – 8 oz. of oil per 128 oz. (1 gallon) of Sunoco 110 for a total of 134 – 136 oz. after mixing.

**Cupping the Air Box:**

Cupping or placing your hand over the air box to force air into the air box is illegal and could result in a penalty.

**Transponder Mounting:**

The transponder shall be mounted securely and safely to the kart. The transponder must be mounted behind the king pin at minimum 9" from center of king pin to the front edge of the transponder. One transponder per kart is allowed. Transponders are mandatory from the beginning of practice through the end of the event.

**Transponder Rental:**

If you do not have your own working transponder, you must rent one on the day of the event. The rental fee for the transponder is \$30 for a two day rental. If the rented transponder is not returned at the conclusion of the event, the entrant will be charged \$250 for the cost of the unit.

**Data Acquisition:**

Data acquisition systems can be used to retrieve any of the following: RPM, lap times, head temperature, exhaust temperature, water temperature, speed, GPS tracking or computer scoring. Any telemetry, other sensors or inputs shall be removed while kart is on track during practice or race days. Data downloading can only be done in the pit

area. Only one beacon for each type of system is allowed on the track and will be placed at the USPKS approved location. GPS systems are legal.

**Communication:**

Driver cannot receive or send any type of radio communication.

**Adjustments:**

The only adjustment a driver can make while on the track is the carburetor, brake bias or radiator louvers/shroud. Removing tape from radiator while on track is allowed. Adjustments must be made manually; mechanical adjustments are illegal.

**Water Cooled Engines:**

Water cooled engines shall have an overflow container that is attached to the radiator. Ethylene glycol based coolants are illegal. Water Wetter or other like surfactants (surface-active agent) can be used.

**Engine Change:**

A maximum of two (2) engines may be used. The primary engine should be recorded and sealed before qualifying. The second engine may be submitted later but must be recorded and sealed by Tech Director prior to any on-track use. Once the "back-up" engine is used it may no longer be used by another driver that day.

**Damaged engine change** – No penalty, competitor keeps earned spot.

**Undamaged engine change** – Competitor starts in rear for upcoming race

\* Engine change is allowed after 1<sup>st</sup> day final and before 2<sup>nd</sup> day qualifying with no penalty.



### **Engine Components:**

Engine components may not be changed for that day after qualifying, (i.e. carburetor or exhaust). If any components are changed the competitor will be required to start in rear of the next race. Rebuilding carburetor or replacing a cracked (not broken or missing end cap) exhaust is allowed with no penalty.

### **Engine Sealing:**

It will be each driver's or guardian's responsibility to correctly seal the engine. If the seal is missing or not installed correctly, the competitor will receive a five position penalty and be charged \$5 for a new seal if needed. If the competitor removes the seal under the direction of USPKS, they will receive another seal at no charge. If the competitor seals the engine incorrectly and needs a new seal or needs a different seal, the competitor will be charged \$5.00 for another seal. Competitor can receive a new seal for the second day of the event if needed at no charge before qualifying on Sunday.

If there is any question as to how to correctly seal the engine, see one of the Tech officials or see pictures in the tech area.

### **\* Route 66 Supplemental Rule:**

If the seal is missing or not installed correctly the competitor will receive one warning for the season and then a two position penalty after that.

### **IAME Engine Claiming:**

USPKS or IAME can claim IAME engines if they deem it necessary. The competitor will receive a new engine plus \$500 for a Swift or KA100 and a new engine plus \$800 for an X30. Engine will include carburetor, air box, clutch, exhaust, electrical system and all parts that were supplied i.e. clutch cover. (Excludes cooling system)

### **Clutches:**

Clutches are required in all classes unless stated under class section.

### **Chassis/Kart Change:**

Changing an un-repairable chassis to a comparable chassis is allowed after tech approval with no penalty to the competitor. If competitor wants to change chassis due to performance they will start in the rear of the next race. A new pre-tech form will need to be obtained from a USPKS Tech Official following approval of the requested chassis change and then completed and presented with the kart to a USPKS Tech Official.

**\* Chassis change is allowed after 1<sup>st</sup> day final and before 2<sup>nd</sup> day qualifying with no penalty.**



## USPKS Class Structure:

\* USPKS will allow any Micro Swift competitor to enter the Yamaha Cadet Class due to only having one Rookie class providing they meet the age requirement. They will not be allowed to run both Micro & Mini Swift. This will not affect the Route 66 Series move up rule.

### **IAME Micro Swift:**

Age: 7 – 10 years old

Engine: IAME Swift 60cc TAG Engine

Carburetor: Tillotson HW-31A

Exhaust: IAME Swift Pipe and 16mm Header

Tires: Slicks MG "HZ" Red 4.60 Fronts & Rears

Rains MG "WT" 4.20 Fronts & Rears

\* Must run Cadet Bodywork including the Cadet nose on Cadet chassis.

\* Qualify on new tires Sat. and run same tires on Sun.

Weight: 225 lbs.

**\* SFI 20.1 Chest Protectors are MANDATORY for all drivers under 13 years old.**

\* See Pages 42, 43 and USPKS Website for additional Engine Rules.

### **Yamaha Cadet:**

Age: 8 – 12 years old

Engine: Yamaha KT100

Carburetor: Walbro WA55

Exhaust: RLV 7548 SSX

Tires: Slicks MG "HZ" Red 4.60 Fronts & Rears

Rains MG "WT" 4.20 Fronts & Rears

\* Must run Cadet Bodywork including the Cadet nose on Cadet chassis.

\* Qualify on new tires Sat. and run same tires on Sun.

Weight: 250 lbs.

**\* SFI 20.1 Chest Protectors are MANDATORY for all drivers under 13 years old.**

\* See Pages 35-41 for additional Engine Rules.

### **IAME Mini Swift:**

Age: 8 – 12 years old

Engine: IAME Swift 60cc TAG Engine

Carburetor: Tillotson HW-31A

Exhaust: IAME Swift Pipe & Header

Tires: Slicks MG "HZ" Red 4.60 Fronts & Rears

Rains MG "WT" 4.20 Fronts & Rears

\* IAME Mini Swift is considered a Cadet class. If a driver chooses to run any Cadet class, they lose their eligibility to run in the Rookie classes. (Move up rule) This only applies to USPKS and does not affect the driver's status in any other series.

\* Must run Cadet Bodywork including the Cadet nose on Cadet chassis.

\* Qualify on new tires Sat. and run same tires on Sun.

Weight: 250 lbs.

**\* SFI 20.1 Chest Protectors are MANDATORY for all drivers under 13 years old.**

\* See Pages 42, 43 and USPKS Website for additional Engine Rules.

### **Yamaha Junior:**

Age: 12 – 15 years old

Engine: Yamaha KT100

Carburetor: Walbro WB3A

Exhaust: RLV 7548 SSX

Tires: Slicks MG "HZ" Red 4.60 Fronts & 7.10 Rears

Rains MG "WT" 4.20 Fronts & 6.00 Rears

\* Qualify on new tires Sat. and run same tires on Sun.

Weight: 310 lbs.

**\* SFI 20.1 Chest Protectors are MANDATORY for all drivers under 13 years old.**

\* See Pages 35-41 for additional Engine Rules.



### **IAME X30 Junior:**

Age: 12 – 15 years old

Engine: IAME X30

Carburetor: Tillotson HW-27A

Exhaust: 29mm restricted header, OEM IAME Pipe

Tires: Slicks MG "FZ" Yellow 4.60 Fronts & 7.10 Rears

Rains MG "WT" 4.20 Fronts & 6.00 Rears

\*Qualify on new tires both days

Weight: 330 lbs.

**\* SFI 20.1 Chest Protectors are MANDATORY for all drivers under 13 years old.**

**\* See Pages 47-49 and USPKS Website for additional Engine Rules.**

### **IAME KA100:**

Age: 15+ years old

Engine: IAME KA100

Carburetor: HW-33A

Exhaust: IAME KA100 Pipe

Tires: Slicks MG "HZ" Red 4.60 Fronts & 7.10 Rears

Rains MG "WT" 4.20 Fronts & 6.00 Rears

\* Qualify on new tires Sat. and run same tires on Sun.

Weight: 360 lbs.

**\* See Pages 44-46 and USPKS Website for additional Engine Rules.**

### **IAME X30 Pro:**

Age: 15+ years old

Engine: IAME X30

Carburetor: Tillotson HW-27A

Exhaust: IAME OEM X30 header & pipe

Tires: MG Slicks MG "FZ" Yellow 4.60 Fronts/ 7.10 Rears

Rains MG "WT" 4.20 Fronts & 6.00 Rears

\*Qualify on new tires both days

Weight: 365 lbs.

**\* See Pages 47-49 and USPKS Website for additional Engine Rules.**



## Route 66 Class Structure:

### **IAME Bambino M1 Kid Kart:**

Age: 5 – 7 years old

**\* Driver will not be able to compete until they reach 5 years old; if the driver turns 5 June 10<sup>th</sup> they can race on or after June 10<sup>th</sup>.**

Engine: IAME Bambino

Tires: Slicks MG "HZ" Red 4.60 Fronts & Rears

Rains MG "WT" 4.20 Fronts & Rears

Weight: 160 lbs.

**\* SFI 20.1 Chest Protectors are MANDATORY for all Kid Kart Drivers.**

Frame – Offset karts are not permitted, seat shall be within the frame rails. Seat and pedals should be located where the driver can reach and control the kart.

Seat and Steering Height – Minimum seat height is 12", maximum steering wheel height is 20".

Wheelbase – 29" minimum 31" maximum.

Width – Front 40" maximum outside of tire/rim, no minimum. Rear 39" minimum, 42" maximum outside of tire/rim.

Bodywork – Side pods and nose cones are mandatory.

Rear Bumper – Must be CIK plastic bumper and shall protect the rear wheels.

Chain Guard – Chain must be completely covered when looking from above or behind kart. A full chain guard is recommended but not mandatory.

Chain and Gearing - #219 chain, 10 tooth driver with 89 tooth gear.

Tire Circumference – Maximum rear tire circumference is 33".

Tire Pressure – Maximum tire pressure is 30 psi after race.

**\* See Page 51 and Route 66 Series Website for additional Engine Rules.**

### **Comer Kid Kart:**

Age: 5 – 7 years old

**\* Driver will not be able to compete until they reach 5 years old; if the driver turns 5 June 10<sup>th</sup> they can race on or after June 10<sup>th</sup>.**

Engine: C – 51 only (See page 40)

Tires: Slicks MG "HZ" Red 4.60 Fronts & Rears

Rains MG "WT" 4.20 Fronts & Rears

Weight: 150 lbs.

**\* SFI 20.1 Chest Protectors are MANDATORY for all Kid Kart Drivers.**

Frame – Offset karts are not permitted, seat shall be within the frame rails. Seat and pedals should be located where the driver can reach and control the kart.

Seat and Steering Height – Minimum seat height is 12", maximum steering wheel height is 20".

Wheelbase – 29" minimum 31" maximum.

Width – Front 40" maximum outside of tire/rim, no minimum. Rear 39" minimum, 42" maximum outside of tire/rim.

Bodywork – Side pods and nose cones are mandatory.

Rear Bumper – Must be CIK plastic bumper and shall protect the rear wheels.

Chain Guard – Chain must be completely covered when looking from above or behind kart. A full chain guard is recommended but not mandatory.

Chain and Gearing - #219 chain, 10 tooth driver with 89 tooth gear.

Tire Circumference – Maximum rear tire circumference is 33".

Tire Pressure – Maximum tire pressure is 30 psi after race.

**\* See Pages 51 & 52 for additional Engine Rules.**



### Yamaha Rookie:

Age: 7 – 10 years old

Engine: Yamaha KT100

Carburetor: Walbro WA55

Exhaust: RLV 7500 YBX

Tires: Slicks MG "HZ" Red 4.60 Fronts & Rears

Rains MG "WT" 4.20 Fronts & Rears

\* Qualify on new tires Sat. and run same tires on Sun.

Weight: 225 lbs.

**\* SFI 20.1 Chest Protectors are MANDATORY for all drivers under 13 years old.**

\* Must run Cadet Bodywork including the Cadet nose on Cadet chassis.

\* The Champion of the Rookie class must move to the next level the following year. The Rookie class is considered a stepping stone to move up to the next class. After two years of running Rookie it is strongly suggested that the competitor move up to the next class.

**\* See Pages 35-41 for additional Engine Rules.**

### IAME Micro Swift:

Age: 7 – 10 years old

\* Micro Swift is considered a Rookie class. If a driver chooses to run any Cadet class in Route 66, they lose their eligibility to run in the Rookie classes (Move up rule).

Engine: IAME Swift 60cc TAG Engine

Carburetor: Tillotson HW-31A

Exhaust: IAME Swift Pipe and 16mm Header

Tires: Slicks MG "HZ" Red 4.60 Fronts & Rears

Rains MG "WT" 4.20 Fronts & Rears

\* Qualify on new tires Sat. and run same tires on Sun.

Weight: 225 lbs.

**\* SFI 20.1 Chest Protectors are MANDATORY for all drivers under 13 years old.**

\* Must run Cadet Bodywork including the Cadet nose on Cadet chassis.

**\* See Pages 42, 43 and Route 66 or USPKS Website for additional Engine Rules.**

### Yamaha Cadet:

Age: 8 – 12 years old

Engine: Yamaha KT100

Carburetor: Walbro WA55

Exhaust: RLV 7548 SSX

Tires: Slicks MG "HZ" Red 4.60 Fronts & Rears

Rains MG "WT" 4.20 Fronts & Rears

\* Qualify on new tires Sat. and run same tires on Sun.

Weight: 250 lbs.

**\* SFI 20.1 Chest Protectors are MANDATORY for all drivers under 13 years old.**

\* Must run Cadet Bodywork including the Cadet nose on Cadet chassis.

**\* See Pages 35-41 for additional Engine Rules.**

### IAME Mini Swift:

Age: 8 – 12 years old

\* IAME Mini Swift is considered a Cadet class. If a driver chooses to run any Cadet class, they lose their eligibility to run in the Rookie classes. (Move up rule) This only applies to USPKS and does not affect the driver's status in any other series.

Engine: IAME Swift 60cc TAG Engine

Carburetor: Tillotson HW-31A

Exhaust: IAME Swift Pipe & Header

Tires: Slicks MG "HZ" Red 4.60 Fronts & Rears

Rains MG "WT" 4.20 Fronts & Rears

\* Qualify on new tires Sat. and run same tires on Sun.

Weight: 250 lbs.

**\* SFI 20.1 Chest Protectors are MANDATORY for all drivers under 13 years old.**

\* Must run Cadet Bodywork including the Cadet nose on Cadet chassis.

**\* See Pages 42, 43 and Route 66 or USPKS Website for additional Engine Rules.**



#### **Yamaha Junior:**

Age: 12 – 15 years old

Engine: Yamaha KT100

Carburetor: Walbro WB3A

Exhaust: RLV 7548 SSX

Tires: Slicks MG "HZ" Red 4.60 Fronts & 7.10 Rears

Rains MG "WT" 4.20 Fronts & 6.00 Rears

\* Qualify on new tires Sat. and run same tires on Sun.

Weight: 310 lbs.

**\* SFI 20.1 Chest Protectors are MANDATORY for all drivers under 13 years old.**

**\* See Pages 35-41 for additional Engine Rules.**

#### **IAME X30 Senior:**

Age: 15+ years old

Engine: IAME X30

Carburetor: Tillotson HW-27A

Exhaust: IAME OEM header & pipe

Tires: Slicks MG "FZ" Yellow 4.60 Fronts & 7.10 Rears

Rains MG "WT" 4.20 Fronts & 6.00 Rears

\* Qualify on new tires both days.

Weight: 365 lbs.

**\* See Pages 47-50 and Route 66 or USPKS Website for additional Engine Rules.**

#### **IAME X30 Junior:**

Age: 12 – 15 years old

Engine: IAME X30

Carburetor: Tillotson HW-27A

Exhaust: 29mm restricted header, OEM IAME Pipe

Tires: Slicks MG "FZ" Yellow 4.60 Fronts & 7.10 Rears

Rains MG "WT" 4.20 Fronts & 6.00 Rears

\* Qualify on new tires both days

Weight: 330 lbs.

**\* SFI 20.1 Chest Protectors are MANDATORY for all drivers under 13 years old.**

**\* See Pages 47-50 and Route 66 or USPKS Website for additional Engine Rules.**

#### **Yamaha Senior:**

Age: 15+ years old

Engine: Yamaha KT100

Carburetor: Walbro WB3A

Exhaust: RLV 7548 SSX

Tires: Slicks MG "HZ" Red 4.60 Fronts & 7.10 Rears

Rains MG "WT" 4.20 Fronts & 6.00 Rears

\* Qualify on new tires Sat. and run same tires on Sun.

Weight: 350 lbs.

**\* See Pages 35-41 for additional Engine Rules.**



## Yamaha KT100 Rules and Regulations:

\* **Note:** All measurements are in inches unless otherwise stated.

\* **Note:** All external modifications that do not increase performance are permitted. All parts to be compared to known stock parts in case of discrepancy. All fasteners and washers are non-tech. Centering washers are allowed under head nuts. Aluminum rotor nut allowed.

**Engine Pressure/Vacuum Testing:** USPKS may perform a pressure or vacuum test to ensure extra air is not being pulled into the engine for any performance gain. Both pressure and vacuum tests may be performed — engine must hold 5 psi for 60 seconds and/or 5 HG of vacuum for 60 seconds.

### **Air Box:**

Air box shall be as manufactured, registered and/or homologated without any modification. Painting or coating is not allowed. Taping is allowed at the boot connector to prevent air box from rotating. A pre-filter cover and one 0.200" drain hole is allowed. Two baffle tubes are allowed with a minimum length of 94.8 mm (3.732") and a maximum diameter of 23 mm (0.905"), similar to the one pictured below. In rain condition any rain covers are legal as long as it does not act as a ram air device.



### **Walbro WA55B Filter Cup:**

Filter cup adapter cannot be "velocity stacked" or shaped to act as a "ram air" tube. The minimum ID of the adapter is 0.750" with 0.30" maximum break on edges; maximum inside depth is 1.25" with a maximum break of .125" and maximum thickness is 0.150". Must be straight bore.

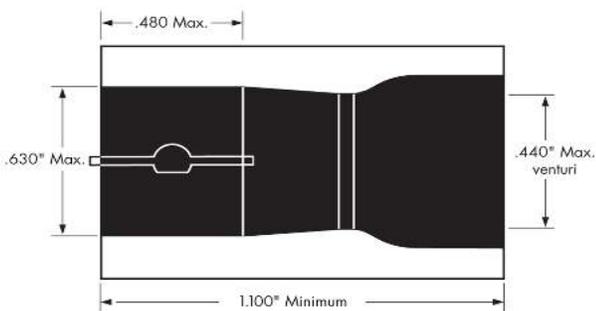
### **Walbro WA55B Carburetor (Rookie & Cadet):**

Carburetor shall be stock appearing and as manufactured; the carburetor may be bolted on in any position. Circuit plate, inlet needle and both screens shall be installed. Inlet spring is not a tech item and shims may be used under inlet spring. Extended metering screws for the high and low needles are legal. Bypassing fuel or air to the motor in any other way than as manufactured is illegal. Filter may be used to protect metering diaphragm. Depressing the diaphragm, funneling the brass inlet, machining the throttle shaft or using auxiliary tuners is illegal. Any diaphragms or gaskets shall be as manufactured. The throttle shaft and the throttle shaft holes shall be round. If the No-Go gauge goes completely through one side of the carburetor body it is illegal.

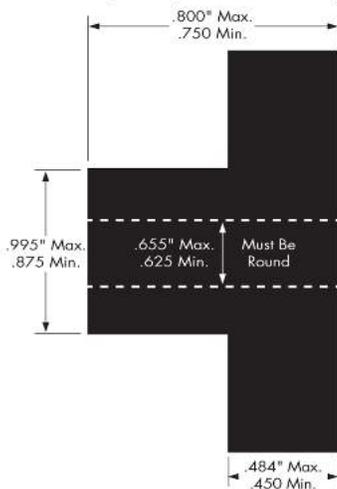
\* See Carb and Components Specs chart on page 40.

### **Walbro WA55B Manifold:**

Manifold shall be machined from aluminum and the ID shall be round. One set of holes for mounting the plate to the phenolic spacer and one set of holes for mounting the carburetor to the spacer is legal. Only air that has passed through the carburetor is allowed. No outside air or leakage is allowed to pass through or around the manifold. The manifold will take the place of the aluminum mounting plate and bolt directly to the phenolic spacer.



Walbro WA55B Bore (above) and Manifold (below)



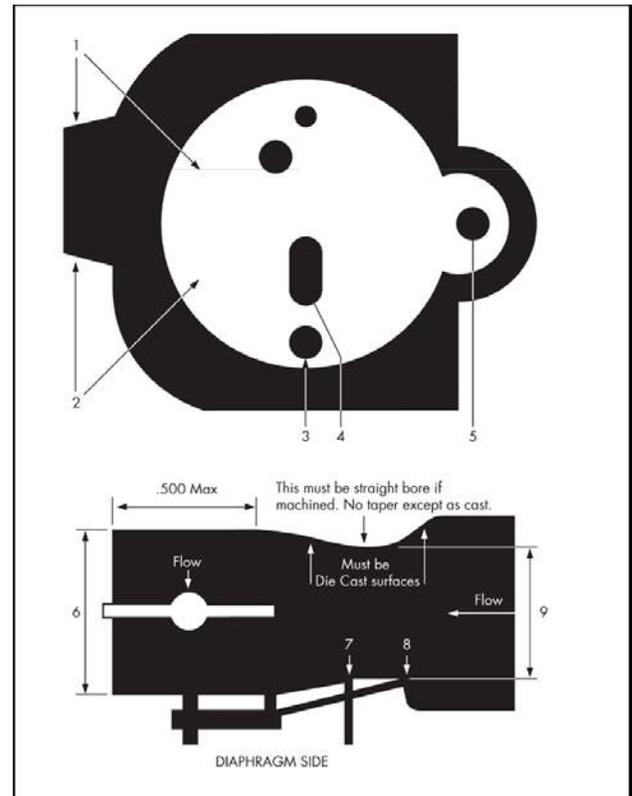
### Walbro WB3A Filter Cup:

Filter cup adapter cannot be "velocity stacked" or shaped to act as a "ram air" tube. The minimum inlet hole size is 1.150" with 0.30" maximum break on edges; maximum inside depth is 1.25" with a maximum break of .125" and maximum thickness is 0.150". Must be straight bore.

### Walbro WB3A Carburetor (Junior & Senior):

Carburetor shall be stock appearing and as manufactured. The carburetor may be bolted on in any position. Circuit plate, inlet needle and both screens shall be installed. Inlet spring is not a tech item and shims may be used under inlet spring. Extended metering screws for the high and low needles are legal. Bypassing fuel or air to the motor in any way other than as manufactured is illegal. Filter may be used to protect metering diaphragm. Depressing the diaphragm, funneling the brass inlet, machining the

throttle shaft or using auxiliary tuners is illegal. Any diaphragms or gaskets shall be as manufactured.



Walbro WB3A Carburetor Specifications

|  |                                    |
|--|------------------------------------|
| 1. High Speed Needle Seat  | .081 No-Go                         |
| 2. Low Speed Needle Seat   | .0595 No-Go                        |
| 3. Idle Jet  | .042 No-Go                         |
| 4. Transmission Jet  | .052 No-Go                         |
| 5. Fuel Inlet Valve Seat   | .064 No-Go                         |
| 6. Diameter at flange end  | 1.010 No-Go                        |
| 7. High Speed Jet<br>(Check with bent gauge from inside venturi) | .074 No-Go                         |
| 8. Air Pre-mix Orifice   | .042 No-Go Max.<br>.032 No-Go Min. |
| 9. Diameter at narrowest part of venturi                         | .950 No-Go                         |

### Aluminum Mounting Plate:

Shall be an OEM part with a straight bore and does not allow any leakage. Only air that has passed through the carburetor is allowed. No outside air or leakage is allowed to pass through or around the mounting plate. One set of holes for mounting the plate to the phenolic spacer and one set of holes for mounting the carburetor to the spacer is legal.

### Phenolic Spacer:

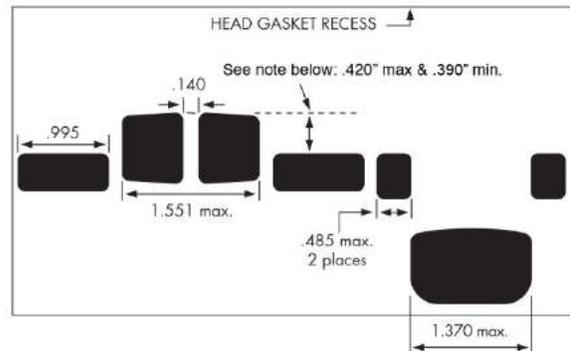
Shall be an OEM part with a straight-bore and does not allow any leakage.

### Cylinder Head:

Must be original Yamaha head and display Yamaha on underside of head. Shall retain original head design i.e. spherical combustion chamber with squish band area. Must be centered in relation to spark plug and stud holes with no offset. Minimum 11 cc's using LAD cc tool. Head gasket must be in place.

### Cylinder:

Only 787-style cylinders are allowed. May machine top and bottom of cylinder for squaring purposes. Original design in head gasket area shall be retained. The only grinding allowed is in aluminum area of intake and exhaust ports. Original design of port area must be retained. No modification to the cast iron portion of any of the ports is legal. Exhaust minimum is 1.155"; intake maximum is .775" using LAD tool. Minimum blow down is .390" using LAD tool. Inlet track is 2.60" minimum and 2.70" maximum with carb base gasket removed.



NOTE: All port widths are chord measurements. Maximum difference (blowdown time) from top of highest exhaust port to top of highest intake port is .420"; minimum is .390"

### Crankcase:

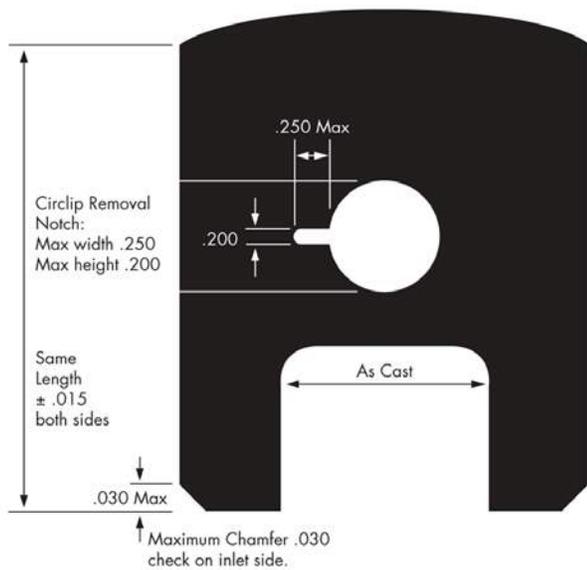
Must be of original design. Minor grinding is allowed only to repair damage due to broken piston or rod failure, no other grinding allowed. Machining of gasket surfaces and exterior bottom of crankcase is allowed. Pulse nozzle may be located in front or back of crankcase with .128" no go. If two pulse nozzles are in cases, one must be plugged so as not to leak. Bearing pockets are permissible in stock location.

### Ignition:

Original Yamaha ignition permitted with one exception: PRD TCI may be used as replacement for original. Key is non-tech. Old and new style rotor allowed. Rotor spec: 2.350" minimum diameter, .815" minimum width, 3 bosses non-tech. Rotor to be compared to known stock rotor in case of discrepancy. Ignition timing measured from TDC to .015" before TDC maximum, rotated in clockwise manner, aligned to trailing edge of magnet.

**Piston:**

Burriss, KSI, Wiseco, and Yamaha brand pistons are allowed. Only machining allowed is on bottom of skirt for intake timing purposes. Front and back must be machined equally with a .030" break or bevel on inner and outer edge of skirt. Top of piston may not be coated.



**Ring:**

Ring must be of ferrous material only and stock appearing.

**Wrist Pin:**

Wrist pin shall be non-coated ferrous material only. Minimum length 1.565", maximum diameter .551" + or - .001", maximum inside diameter .410".

**Connecting Rod:**

Original stock connecting rod only, part number 50w-11651-00 and 7F6-11651-02 allowed. No grinding or polishing allowed.

**Crank:**

Crank shall be original manufactured only. Crank sleeves are allowed. Outside diameter 3.410" minimum, and crank width 1.790" minimum. Polishing allowed. Plugged and non-plugged, non-coated crankpin allowed.

**Bearings:**

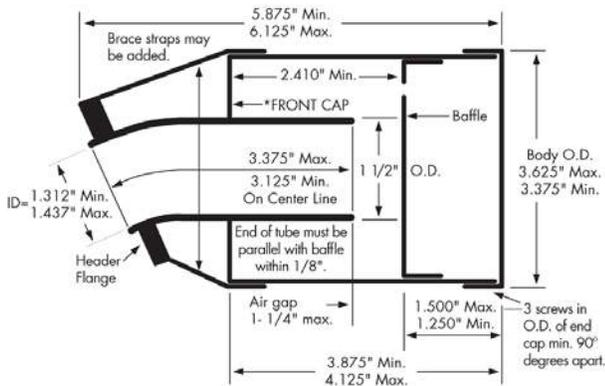
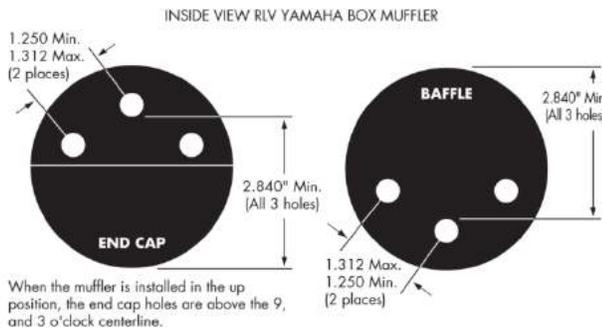
Bearings shall be of original design only, model # 6304, 6205, 1205 or 1304 allowed.

**Crank/Bottom End Specs**

|                                       |               |
|---------------------------------------|---------------|
| Complete Crank, Heavy Rod W/Sleeves   | 1806g + - 10g |
| Complete Crank, Lite Rod W/Sleeves    | 1796g + - 10g |
| Mag. Side of Crank                    | 757g + - 5g   |
| Mag. Side of Crank W/Sleeve           | 778g + - 5g   |
| PTO Side of Crank                     | 789g + - 5g   |
| PTO Side of Crank W/Sleeve            | 810g + - 5g   |
| Heavy Rod                             | 104g + - 2g   |
| Lite Rod                              | 95g + - 2g    |
| Main Rod Bearing OEM                  | 15g + - 1g    |
| Main Rod Bearing After Market         | 16g + - 1g    |
| Crank Pin W/OEM or After Market Plugs | 86g + - 2g    |
| Trust Washer                          | 3g + - 1g     |
| Wrist Pin OEM (Lip inside)            | 30g + - 1g    |
| Wrist Pin After Market                | 25g + - 1g    |
| Top Rod Bearing OEM                   | 10g + - 1g    |
| Top Rod Bearing After Market          | 9g + - 1g     |
| Top Rod Bearing Leopard               | 9g + - 1g     |

### YBX (3-Hole) Muffler:

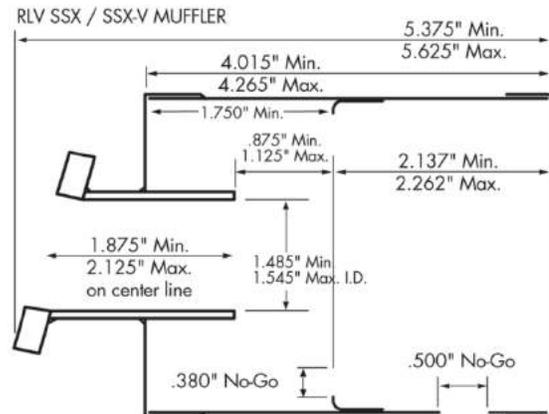
RLV is the manufacturer of this muffler and shall be used as manufactured; any modification to this muffler is illegal. The muffler shall fasten to the motor so the can is approximately perpendicular with the cylinder, with no leakage around the flange area. One exhaust gasket is allowed with a maximum thickness of 0.200"; known stock Yamaha gasket can be used for comparison. The end cap shall attach with three solid screws in the original RLV manufactured holes with no leakage; drilling additional holes for mounting the end cap is illegal. The three .380" holes in the end cap shall be 180 degrees or opposite of the three .380" holes in the baffle; these six holes are .380" No-Go holes. One hole for EGT probe is allowed in the pipe between the flange and the front of the can. If probe is not in place hole must be plugged.



\*EGT gauge is allowed. Must not leak. Must be located between header flange on front cap.

### SSX (4-Hole) Muffler:

RLV is the manufacturer of this muffler and shall be used as manufactured; any modification to this muffler is illegal. The muffler shall fasten to the motor so the can is approximately perpendicular with the cylinder, with no leakage around the flange area. One exhaust gasket is allowed with a maximum thickness of 0.200"; known stock Yamaha gasket can be used for comparison. The end cap shall attach with three solid screws in the original RLV manufactured holes with no leakage; drilling additional holes for mounting the end cap is illegal. The four .500" No-Go holes in the outer part of the body shall be approximately 90 degrees apart with the top hole between 10:30 and 1:30. The inside baffle contains fourteen (14) .380" No-Go holes. One hole for EGT probe is allowed in the pipe between the flange and the front of the can. If probe is not in place hole must be plugged.



Must be round holes. SSX-V has 4 holes at 90 degrees.



## Yamaha KT 100 Specs

|  |               |
|--|---------------|
| Min. Intake Track Length   | 2.60"         |
| Max. Intake Track Length   | 2.70"         |
| Combustion Chamber CC,<br>W/LAD Plug                                   | 11            |
| Min. Exhaust Port Height   | 1.155"        |
| Max. Intake Port Opening   | 0.775"        |
| Minimum Blow Down  | 0.390"        |
| Min. Exhaust Rib Width   | 0.140"        |
| Max. Exhaust Chord Width   | 1.551"        |
| Max. Intake Chord Width  | 1.370"        |
| Max. Transfer Ports Chord  | 0.485"        |
| Max Small Transfer Ports Height<br>(bottom of port to top of port)     | 0.475"        |
| Max Longer Transfer Ports<br>Height (bottom of port to top of<br>port) | 0.530"        |
| Chord Widths   | 0.995"        |
| Max. Cylinder Bore   | 2.085"        |
| Max. Piston Stroke   | 1.816"        |
| Max. Piston Skirt Chamfer  | 0.030"        |
| Min. Wrist Pin Length  | 1.565"        |
| Max. ID Wrist Pin  | 0.410"        |
| Max. OD Wrist Pin  | 0.552"        |
| Min. Crank Outside Width   | 1.790"        |
| Min. Crank Inside Width  | 0.343         |
| Max. ID Pulse Hole   | 0.128 (No-Go) |

## Carb. & Components Specs

|  |                |
|--|----------------|
| WA55B Max Front Side                   | 0.440" (No-Go) |
| WA55B Max Back Side                    | 0.630" (No-Go) |
| WA55B Min. Length                      | 1.100"         |
| WA55B Max High & Low Seat              | 0.037" (No-Go) |
| WA55B Manifold Min. ID                 | 0.625" (Go)    |
| WA55B Manifold Max. ID                 | 0.655" (No-Go) |
| WA55B Min. Throttle Shaft<br>Diameter  | 0.183"         |
| WA55B Throttle Shaft Holes             | 0.189" (No-Go) |
| WA55B & WB3A Min. Shutter<br>Thickness | 0.030"         |
| WB3A Max. Front Side                   | 0.950" (No-Go) |
| WB3A Max. Back Side                    | 1.010" (No-Go) |
| WB3A Min. Length                       | 1.480"         |
| Alum. Mounting Plate Min. ID           | 1.000" (Go)    |
| Alum. Mounting Plate Max. ID           | 1.050" (No-Go) |
| Mounting Plate Max. Thickness          | 0.485"         |
| Phenolic Spacer Min. ID                | 1.000" (Go)    |
| Phenolic Spacer Max. ID                | 1.050" (No-Go) |
| Phenolic Spacer Max. Thickness         | 0.405"         |
| Air Box Tubes Max. ID                  | 0.905 (No-Go)  |
| Air Box Tubes Min. Length              | 3.732"         |

## Cans

|                               |                 |
|-------------------------------|-----------------|
| YBX 3 Hole Can Baffle Holes   | 0.380" (No-Go)  |
| YBX 3 Hole Can Cap Holes      | 0.380" (No-Go)  |
| YBX 3 Hole Can Pipe - Baffle  | 1.25" Max       |
| SSX 4 Hole Can Baffle Holes   | 0.380" (No-Go)  |
| SSX 4 Hole Can Outside Holes  | 0.500" (No-Go)  |
| SSX 4 Hole Can Pipe - Baffle  | 1.125" Max      |
| 3&4 Inlet Tube Wall Thickness | .065" + - .010" |

## Sealing the Yamaha Engine:



1. One head nut.
  2. Two studs on carb. (Jr. & Sr. 1<sup>st</sup> two studs are free)
  3. Timing cover bolt.
  4. Under the brace on the muffler
- Recommend at least a 5/64" hole.
  - Hole and cable must go completely through head of bolt.
  - If cable will not go through seal push the cable back and forth a few times to release the lock inside the seal.



## IAME Swift Rules and Regulations:

\* **Note: All measurements are in inches unless otherwise stated.**

\* **Homologation Document listed on the USPKS website will be used for anything not listed below.**

\* **Note: Any part may be compared to known stock part for determination of legality.**

\* **No external modifications of any type including air scoops or heat retention additions.**

### **Engine Pressure/Vacuum Testing:**

USPKS may perform a pressure or vacuum test to ensure extra air is not being pulled into the engine for any performance gain. Both pressure and vacuum tests may be performed — engine must hold 5 psi for 60 seconds and/or 5 HG of vacuum for 60 seconds.

### **Carburetor:**

Tillotson HW-31A

Max. Venturi (No Go) 17.15mm

Max Throttle Bore (No Go) 22.10mm

Stock butterfly screw shall be in place

\*Bypassing fuel or air to the motor in any way other than as manufactured is illegal.

### **Fuel Filter:**

Any fuel filter is permitted. If utilized, it must be between the tank and carburetor.

### **Air Box and Filter:**

Blue OEM air box shall be as manufactured, one (1) 23mm tube (No Go). One (1) 0.200" drain hole is allowed. The following filters are legal but not required (replaces rubber boot): IAME # 10751-A or RLV # 0204. Any external forms of air ducts forcing air inside of air box is

illegal. Rain covers are legal during rain conditions as long as it does not act as a ram air device.

### **Spark Plug:**

Must be as manufactured with OEM spark plug washer in place. Head temp sensor or indexing washer may be used along with the OEM spark plug washer.

Any of the following plugs may be used:

Autolite AR51 or AR50

Denso W#ESZU

NGK B ## EG or BR ## EG

### **Spark Plug Boot:**

OEM part PVL #10544 or NGK #8636 (TB05EMA)

### **Bearings, Seals, O-Rings, Gaskets:**

May be replaced with aftermarket equivalent. No ceramic or exotic bearings.

### **Exhaust Header:**

As factory supplied. Shall have a hole drilled completely through one of the header mounting nuts that will allow the engine seal wire to pass through it.

### **Swift Rookie Header:**

16mm (0.630") maximum (No Go)

### **Exhaust Pipe:**

Shall be as manufactured. Altering internal dimensions or modifications to pipe or silencer end cap is illegal.

One hole for exhaust temperature sensor is allowed; if sensor is not used, hole shall be completely plugged.

Excessive leakage in any part of the exhaust system is illegal and competitor could be DQ'ed.

### **Clutch:**

As factory supplied. Maximum drum ID 3.354" (85.2mm).

Must be IAME 10 or 11 tooth drum with or without holes.

Oiling clutch is illegal. Must pass clutch test: while on the kart stand competitor will start engine and by holding the brake and applying throttle RPM must not exceed 5000.

## IAME Swift Specs

|  |            |
|--|------------|
| Squish (minimum 1/16" solder)          | 0.025"     |
| Min. Exhaust Port Height (LAD Tool)    | 1.230"     |
| Min. Exhaust Port Height (light check) | 1.095"     |
| Inlet Port Height (LAD Tool)           | 0.585"     |
| Maximum Bore 42.07mm                   | 1.656"     |
| Maximum Stroke 43.15mm                 | 1.699"     |
| Complete Crank Shaft Min. Weight       | 1190 grams |
| Piston Pin Minimum Weight              | 15.5 grams |
| Minimum Clutch Diameter 83mm           | 3.267"     |



## Swift Carburetor Spec.

### Spec. Carb. Tillotson HW-31A

|                              |        |
|------------------------------|--------|
| Max. Venturi 17.15mm (No-Go) | 0.675" |
| Max. Bore 22.10mm (No-Go)    | 0.870" |
| Min. Shutter Thickness       | 0.030" |

Stock butterfly screw shall be in place



## Sealing the Swift Engine:



1. One head nut.
2. Two studs on carb. (1<sup>st</sup> two studs are free)
3. Spring tab on pipe and one of the header nuts.  
(The cable needs to just go through the seal, this will allow you to pull the pipe back to check the color.)
  - Recommend at least a 5/64" hole.
  - Hole and cable must go completely through head of bolt.
  - If cable will not go through seal push the cable back and forth a few times to release the lock inside the seal.



## IAME KA100 Rules and Regulations:

- \* Must be USA engine.
- \* Note: All measurements are in inches unless otherwise stated.
- \* Homologation Document listed on the USPKS website will be used for anything not listed below.
- \* Note: Any part may be compared to known stock part for determination of legality.
- \* No external modifications of any type including air scoops or heat retention additions.

### **Engine Pressure/Vacuum Testing:**

USPKS may perform a pressure or vacuum test to ensure extra air is not being pulled into the engine for any performance gain. Both pressure and vacuum tests may be performed — engine must hold 5 psi for 60 seconds and/or 5 HG of vacuum for 60 seconds.

### **Air Box:**

Must use OEM air box with OEM internal foam filter. Max inside diameter of tubes is 23mm (0.905" No Go). One (1) 0.200" drain hole is allowed. In rain condition any rain covers are legal as long as it does not act as a ram air device.

### **Fuel Filter:**

Any fuel filter is permitted. If utilized, it must be between the tank and carburetor.

### **Carburetor:**

Tillotson HW-33A shall be OEM as manufactured. The carburetor including the finish of the venturi and bore, the arm, throttle shaft, butterfly, slide assembly for jetting and/or manifold shall be OEM and not modified. OEM needle jets are required. Engine and carburetor shall match the specs and carburetor shall be mounted as specified by manufacturer.

\*Bypassing fuel or air to the motor in any way other than as manufactured is illegal.

### **Reed Cage:**

Only OEM fiberglass reeds are allowed with a minimum thickness of 0.011". Manifold shape and design shall remain as manufactured; grinding or polishing the reed cage or manifold is illegal. Removal of excess loose rubber at manufactured parting lines, resurfacing rubber contact surface to reeds and gasket surface, de-burring and minor grinding at reed attachment screws are allowed. Reed screws are non-tech.

### **Spark Plug:**

Must be as manufactured with OEM spark plug washer in place. Head temp sensor or indexing washer may be used along with the OEM spark plug washer.

Any of the following plugs may be used:

NGK B10EG, BR10EG, 6254-105 or R6252K-105

### **Spark Plug Boot:**

OEM part PVL #10544 or NGK #8636 (TB05EMA)

### **Cylinder Head:**

Cylinder head shall be OEM as manufactured; head shall be the same profile as the IAME gauge. Only modification allowed is spark plug thread repair.

### **Cylinder Head Gasket:**

Changing the cylinder head gasket to adjust the squish is allowed. Thickness of the copper gasket is a non-tech item. Minimum squish is .041" using 1/16" 50/50 solder.

### **Cylinder:**

Ports must remain as manufactured, known stock part may be used as a comparison. Bore and stroke shall be per manufacturer spec and will be taken as raced. Any internal modification such as adding, removing or grinding material is prohibited.

**Base Gaskets:**

Changing base gaskets is allowed to obtain exhaust port height, no min. max. thickness.

**Bearings, Seals, O-Rings, Gaskets:**

May be replaced with aftermarket equivalent. No ceramic or exotic bearings.

**Crankcase:**

Crankcase shall be as manufactured; metal removal or polishing is not allowed except for de-burring and or repair from rod failure. Main bearing pocket repair is allowed provided the pockets are not relocated during the process. Bearings and seals must be OEM as manufactured; replacement bearings shall be a standard bearing with steel or plastic retainers with same width and diameter as stock. Dual-row, ceramic or angular contact bearings are illegal. Seals shall be as manufactured and shall not have the spring removed, trimmed or installed backwards. Any internal modification such as adding, removing or grinding material is prohibited unless it is for minor repairs as stated above.

**Crankshaft and Rod:**

The crankshaft shall be OEM as supplied from the manufacturer; crank shall be the same manufacturer as the motor. Plastic or aluminum crankshaft stuffing supplied by the manufacturer is required. Removing metal, shot peening, polishing or counterweight plugging is illegal. Weights must match that of the supplied specifications. Rod must be OEM as manufactured; removing metal or modifying rod is illegal. Any rod bearing is legal.

**Piston and Ring:**

Piston and rings shall be OEM as supplied from the manufacturer; piston shall be the same manufacturer as the motor. The stock piston may be coated. The wrist pin shall be made from ferrous material.

**Ignition:**

Ignition shall be OEM as manufactured. Flywheel key must be in place and not modified.

**Header and Pipe:**

Shall be OEM as manufactured; intentional header and pipe modifications are illegal. Interchanging, plating or ceramic-coating is illegal. The system shall be intact at the start and finish of the race as manufacturer intended. One hole for EGT probe is allowed in the header. If probe is not in place hole must be plugged. Must use OEM gasket, only one is permitted. Excessive leakage in any part of the exhaust system is illegal and competitor could be DQ'ed,

**Starter & Battery:**

Competitor is allowed to remove the starter and battery if they choose. The starter ring gear must remain in place.

**Clutch:**

Clutch shall be OEM as manufactured and within factory spec. Oiling clutch is illegal. Clutch cannot be adjustable and must pass clutch test: while on the kart stand competitor will start engine and by holding the brake and applying throttle RPM must not exceed 6000.

**Timing Procedure:**

1. Insert dial indicator in spark plug hole
2. Zero at TDC
3. Roll piston back 0.200" before TDC
4. Roll piston forward to align timing marks
5. Dial indicator must read between 0.080" – 0.106" before TDC

## IAME KA100 Specs

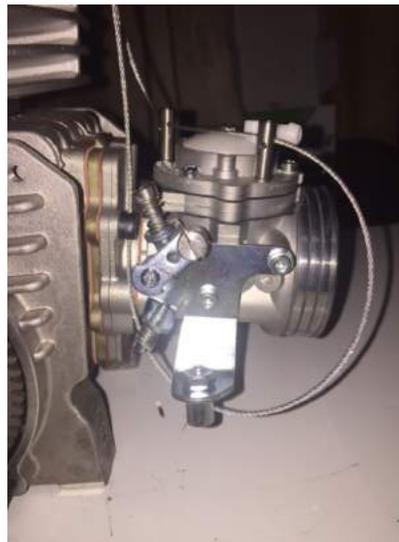
|                                      |                    |
|--------------------------------------|--------------------|
| Minimum Squish                       | 0.041"             |
| Min. Reed Thickness                  | 0.011"             |
| Min. Port Height "LAD Tool"          | 1.420"             |
| Min. Port Height "Light Check"       | 1.295"             |
| Piston Type - Single Dykes Ring      |                    |
| Rod Length                           | 102mm              |
| Max. Stroke                          | 54.05mm            |
| Maximum Bore                         | 48.53mm            |
| Clutch - 3 Shoe No Spring            |                    |
| Minimum Clutch Diameter 83mm         | 3.267"             |
| Timing min. - max.                   | 0.080" -<br>0.106" |
| Ignition - Selettra Analogue 2 Poles |                    |
| Min. Complete Crank Weight           | 1820 grams         |

## Carburetor Specs

### Spec. Carb. Tillotson HW-33A

|                         |        |
|-------------------------|--------|
| Venturi 24.10mm (No-Go) | .948"  |
| Bore 28.10mm (No-Go)    | 1.106" |
| Min. Shutter Thickness  | 0.030" |

## Sealing the KA100 Engine:



1. One head nut.
  2. Reed cage bolt.
  3. Two studs on carb. (1<sup>st</sup> two studs are free)
- Recommend at least a 5/64" hole.
  - Hole and cable must go completely through head of bolt.
  - If cable will not go through seal push the cable back and forth a few times to release the lock inside the seal.

## IAME X30 Rules and Regulations:

\* **Note:** All measurements are in inches unless otherwise stated.

\* **Homologation Document** listed on the **USPKS** website will be used for anything not listed below.

\* **Note:** Any part may be compared to known stock part for determination of legality.

\* **No external modifications of any type including air scoops or heat retention additions.**

### **Engine Pressure/Vacuum Testing:**

USPKS may perform a pressure or vacuum test to ensure extra air is not being pulled into the engine for any performance gain. Both pressure and vacuum tests may be performed — engine must hold 5 psi for 60 seconds and/or 5 HG of vacuum for 60 seconds.

### **Air Box:**

Must use OEM air box as pictured below. Max inside diameter of tubes is 23mm. (0.905" No Go) Internal foam filters are allowed with no modification. One (1) 0.200" drain hole is allowed. In rain condition any rain covers are legal as long as it does not act as a ram air device.



### **Carburetor:**

Shall be OEM as manufactured. The carburetor including the finish of the venturi and bore, the arm, throttle shaft, butterfly, slide assembly for jetting and/or manifold shall be OEM and not modified. OEM needle jets are required. Engine and carburetor shall match the specs and carburetor shall be mounted as specified by manufacturer. \*Bypassing fuel or air to the motor in any way other than as manufactured is illegal.

### **Reed Cage:**

Only OEM fiberglass reeds are allowed with a minimum thickness of 0.011". Manifold shape and design shall remain as manufactured; grinding or polishing the reed cage or manifold is illegal. Removal of excess loose rubber at manufactured parting lines, resurfacing rubber contact surface to reeds and gasket surface, de-burring and minor grinding at reed attachment screws are allowed. Reed screws are non-tech.

### **Spark Plug:**

Must be as manufactured with OEM spark plug washer in place. Head temp sensor or indexing washer may be used along with the OEM spark plug washer.

Any of the following plugs may be used:  
NGK R6252K-105 or NGK R6254-105

### **Spark Plug Boot:**

OEM part PVL #10544 or NGK #8636 (TB05EMA)

### **Cylinder Head:**

Cylinder head shall be OEM as manufactured; head shall be the same profile as the IAME gauge.

### **Cylinder:**

Ports must remain as manufactured, known stock part may be used as a comparison. Bore and stroke shall be per manufacturer spec and will be taken as raced + or - 0.008". Any internal modification such as adding, removing or grinding material is prohibited.

### Crankcase:

Crankcase shall be as manufactured; metal removal or polishing is not allowed except for de-burring and or repair from rod failure. Main bearing pocket repair is allowed provided the pockets are not relocated during the process. Bearings and seals must be OEM as manufactured; replacement bearings shall be a standard bearing with steel or plastic retainers with same width and diameter as stock. Dual-row, ceramic or angular contact bearings are illegal. Seals shall be as manufactured and shall not have the spring removed, trimmed or installed backwards. Any internal modification such as adding, removing or grinding material is prohibited unless it is for minor repairs as stated above.

### Crankshaft and Rod:

The crankshaft shall be OEM as supplied from the manufacturer; crank shall be the same manufacturer as the motor. Plastic or aluminum crankshaft stuffing supplied by the manufacturer is required. Removing metal, shot peening, polishing or counterweight plugging is illegal. Weights must match that of the supplied specifications. Rod must be OEM as manufactured; removing metal or modifying rod is illegal. Any rod bearing is legal.

### Piston and Rings:

Piston and rings shall be OEM as supplied from the manufacturer; piston shall be the same manufacturer as the motor. The stock piston may be coated. The wrist pin shall be made from ferrous material.

### Bearings, Seals, O-Rings, Gaskets:

May be replaced with aftermarket equivalent. No ceramic or exotic bearings.

### Ignition:

Ignition shall be OEM as manufactured. Timing shall be the factory setting. Flywheel key must be in place and not modified. System shall be as supplied with control box mounted with factory markings visible for inspection.

### Stator:

The stator holes and bolts must be as manufactured and shall not exceed the measurements listed below.



### Header, Connector and Pipe:

Shall be OEM as manufactured; intentional header and pipe modifications are illegal. Interchanging, plating or ceramic-coating is illegal. The system shall be intact at the start and finish of the race as manufacturer intended. Connector can be flex or solid, must be round and the same O.D. as manufacturer supplies. One hole for EGT probe is allowed in the header. If probe is not in place hole must be plugged. Excessive leakage in any part of the exhaust system is illegal and competitor could be DQ'ed.

### Radiator:

Radiator shall have a catch container for overflow. Thermostats are allowed. Ethylene glycol based material, pressurized systems and electric pumps are illegal. Tape may be removed from radiator while on the racing surface.

### Clutch:

Clutch shall be OEM as manufactured and within factory spec. Oiling clutch is illegal. Clutch cannot be adjustable and must pass clutch test: while on the kart stand competitor will start engine and by holding the brake and applying throttle RPM must not exceed 6000.



## IAME X30 Specs

|                                  |            |
|----------------------------------|------------|
| Minimum Squish                   | 0.0354"    |
| Min. Reed Thickness              | 0.011"     |
| Min. Port Height "Light Check"   | 1.215"     |
| Min. Port Height "LAD Tool"      | 1.340"     |
| Piston Type - Single Dykes Ring  |            |
| Rod Length - Center to Center    | 102mm      |
| Maximum Stroke                   | 54mm       |
| Maximum Bore                     | 54.35mm    |
| Clutch - 3 Shoe No Spring        |            |
| Minimum Clutch Diameter 83mm     | 3.267"     |
| Timing                           | Fixed      |
| Ignition - Selettra Digital K    |            |
| Restricted Junior Header (No-Go) | 29mm       |
| Flex                             | 16 3/4"    |
| Min. Complete Crank Weight       | 2150 grams |
| Min. Balancing Shaft Weight      | 315 grams  |

## Carburetor Specs

### **Spec. Carb. Tillotson HW-27A**

|                        |        |
|------------------------|--------|
| Venturi 27mm (No-Go)   | 1.063" |
| Bore 29.10mm (No-Go)   | 1.146" |
| Min. Shutter Thickness | 0.030" |

## Sealing the X30 Engine:



- 1 One head nut.
  - 2 Reed cage bolt.
  - 3 Two studs on carb. (1<sup>st</sup> two studs are free)
  - 4 Side cover bolt.
  - 5 Under the header brace.
- Recommend at least a 5/64" hole.
  - Hole and cable must go completely though head of bolt.
  - If cable will not go through seal push the cable back and forth a few times to release the lock inside the seal.



## IAME Bambino M1 Rules & Regulations:

\* **Note: All measurements are in inches unless otherwise stated.**

\* **Homologation Document listed on the USPKS website will be used for anything not listed below.**

\* **Note: Any part may be compared to known stock part for determination of legality.**

\* **No external modifications of any type including air scoops or heat retention additions.**

### **Engine Pressure/Vacuum Testing:**

USPKS may perform a pressure or vacuum test to ensure extra air is not being pulled into the engine for any performance gain. Both pressure and vacuum tests may be performed — engine must hold 5 psi for 60 seconds and/or 5 HG of vacuum for 60 seconds.

### **Engine:**

Shall remain stock as manufactured.

### **Carburetor:**

Tillotson HS-323A

Shall be as manufactured. \*Bypassing fuel or air to the motor in any way other than as manufactured is illegal.

### **Fuel Filter:**

Any fuel filter is permitted. If utilized, it must be between the tank and carburetor.

### **Air Filter:**

OEM air filter shall be as manufactured, OEM foam insert must be used.

### **Spark Plug:**

NGK – BR9EG or BR10EG

### **Spark Plug Boot:**

OEM or NGK

### **Muffler:**

Must use OEM muffler. Excessive leakage in any part of the exhaust system is illegal and competitor could be DQ'ed.

### **Clutch:**

As factory supplied. Maximum drum ID 3.354" (85.2mm). Must be IAME 10 tooth drum without holes. Oiling clutch is illegal. Must pass clutch test: while on the kart stand competitor will start engine and by holding the brake and applying throttle RPM must not exceed TDB.

### **Timing Procedure:**

1. Insert dial indicator in spark plug hole
2. Zero at TDC
3. Roll piston back to align marks  
**Per M1 60cc - Pull Start – USA PDF Dated 22/03/2017 (Found on Rt.66 website)**
4. Reading must be between 0.035" (0.9mm) - 0.059" (1.5mm) before TDC

## Comer C-51 Rules & Regulations:

\* **Note: Any part may be compared to known stock part for determination of legality.**

### **Engine Pressure/Vacuum Testing:**

USPKS may perform a pressure or vacuum test to ensure extra air is not being pulled into the engine for any performance gain. Both pressure and vacuum tests may be performed — engine must hold 5 psi for 60 seconds and/or 5 HG of vacuum for 60 seconds.

### **Engine:**

Shall remain stock as manufactured.



**Carburetor:**

Model SHA 14 12L Dellorto

Shall be as manufactured; broken carburetors cannot be repaired outside of damaged bolt holes that can be repaired with tread insert or bigger bolt.

**Intake Manifold:**

Shall be as manufactured; any polishing is illegal.

**Air Filter:**

Open.

**Spark Plug:**

Shall be OEM 3/8" reach.

**Cylinder:**

Shall be as manufactured; any grinding is illegal.

**Piston:**

Shall be OEM/Stock appearing. Skirts shall be the same measurement +/- 0.015" on each side with the minimum length of 1.210" from the bottom of the bottom ring groove to bottom of piston skirt.

**Ring:**

Must be OEM with a maximum gap of 0.040 and shall not fall through the cylinder.

**Combustion Chamber:**

Shall be as manufactured. Threads shall be intact; if threads are repaired with thread insert, it shall be full length.

**Crank and Wrist Pins:**

Shall be OEM.

**Main Bearings:**

Shall be same type and size as OEM bearings. Dual row bearings are legal; ceramic or other exotic bearings are illegal.

**Seals:**

Shall be in place as manufactured. Any attempt to reduce drag or sealing is illegal; leaking seals could lead to disqualification.

**Base Gasket:**

Shall be used with no maximum thickness.

**Clutch:**

Clutch shall be as manufactured. Shoe shall be stock appearing; removing material or polishing is illegal, and shoes shall have the Comer in the casting.

**Muffler:**

Shall be C51 OEM with a single OEM gasket in place. Bolts shall be tight; if safety wire is used, the muffler shall not be able to be moved by hand. The exhaust holes shall pass the 0.110"/0.475" No-Go inspection.

**Tape on Engine Shroud:**

Placing tape on the engine shroud is allowed.

**Comer C-51 Specs**

CC – 8.3 using LAD cc plug with 0.310 spacer

Exhaust – 1.200 minimum, using a 3mm rod

Intake – 0.370 maximum, using a 3mm rod

Timing – 0.040 – 0.060

Clutch Spring – Max. Diameter 0.430" with 9 coils

Wire Diameter 0.075" – 0.080"

Carburetor – Venturi 0.475" (No Go)

Jet – 0.019" (Go), 0.026" (No Go)

Atomizer Tube – Bottom hole 0.035" (No Go)

Top hole 0.049" (No Go)



# Notes



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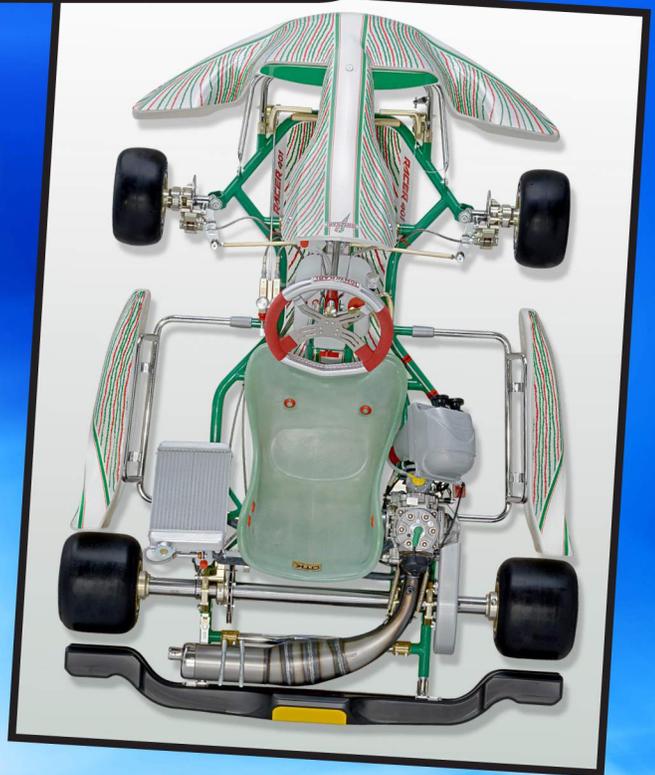
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